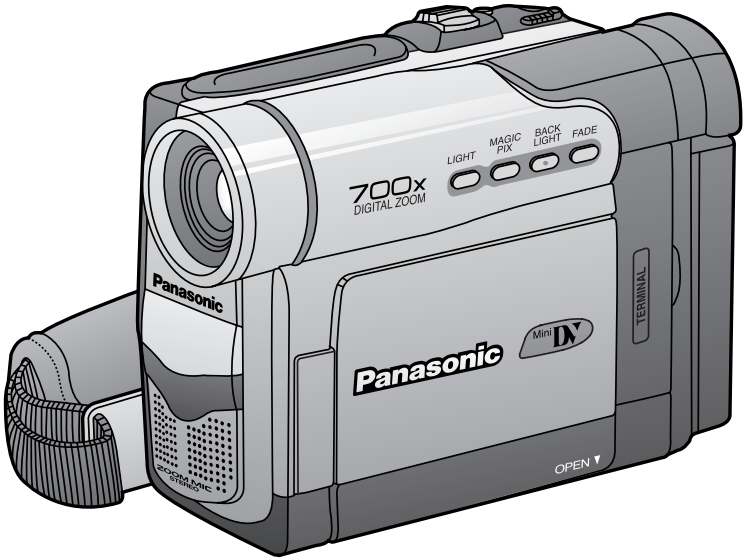
Digital Palmcorder®
Camcorder

Panasonic®

Digital Video Camcorder

Operating Instructions

Model No. PV-DV103



Mini DV

Before attempting to connect, operate or adjust this product, please read these instructions thoroughly.

Spanish Quick Use Guide is included.
Guía para rápida consulta en español está incluida.

For assistance, please call : 1-800-211-PANA(7262) or send e-mail to : consumerproducts@panasonic.com

0652B

LSQT0652B

Things You Should Know

Thank you for choosing Panasonic!

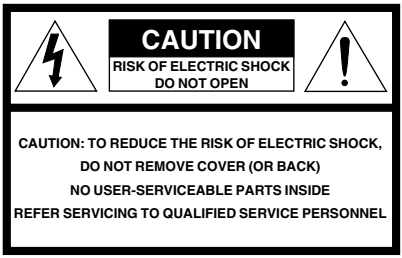
You have purchased one of the most sophisticated and reliable products on the market today. Used properly, we're sure it will bring you and your family years of enjoyment. Please take time to fill in the information below. The serial number is on the tag located on the underside of your Palmcorder. Be sure to **retain this manual** as your convenient Palmcorder information source.

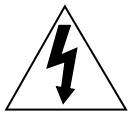
Date of Purchase
Dealer Purchased From
Dealer Address
Dealer Phone No.
Model No.
Serial No.

Safety Precautions

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE.

Your Mini DV Palmcorder is designed to record and play back in Standard Play (SP) mode and Long (LP) mode.
It is recommended that only cassette tapes that have been tested and inspected for use in VCR machines with the Mini DV mark be used.


CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK)
NO USER-SERVICEABLE PARTS INSIDE
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL



This symbol warns the user that uninsulated voltage within the unit may have sufficient magnitude to cause electric shock. Therefore, it is dangerous to make any kind of contact with any inside part of this unit.

This symbol alerts the user that important literature concerning the operation and maintenance of this unit has been included. Therefore, it should be read carefully in order to avoid any problems.

The above markings are located on the appliance bottom cover.

Declaration of Conformity

Model Number : **PV-DV103**
Trade Name : Panasonic
Responsibility Party : Matsushita Electric Corporation of America
Address : One Panasonic Way Secaucus New Jersey 07094
Telephone Number : 1-800-211-PANA(7262)

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when operated in a residential environment.
If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, use the equipment in another location and/or utilize an electrical outlet different from that used by the receiver.
If necessary, consult the dealer or an experienced radio/TV technician for help. You may find the booklet, 'Something About Interference' available from FCC local regional offices helpful.

FCC Warning: To assure continued FCC compliance, use only the provided shielded interface cable when connecting digital video camcorder to computer in accordance with instruction herein. Also, any unauthorized changes or modifications to this equipment would void the user's authority to operate.

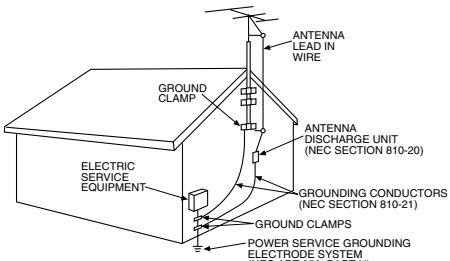
Important Safeguards

1. Read Instructions — All the safety and operating instructions should be read before the unit is operated.
2. Retain Instructions — The safety and operating instructions should be retained for future reference.
3. Heed Warnings — All warnings on the unit and in the operating instructions should be adhered to.
4. Follow Instructions — All operating and maintenance instructions should be followed.
5. Cleaning — Unplug this video unit from the wall outlet before cleaning. Do not use liquid or aerosol cleaners. Use a dry cloth for cleaning.
6. Attachments — Do not use attachments not recommended by the video product manufacturer as they may be hazardous.
7. Water and Moisture — Do not use this video unit near water — for example near a bath tub, wash bowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool, and the like.
8. Accessories — Do not place this video unit on an unstable cart, stand, tripod, bracket, or table. The video unit may fall, causing serious injury to a child or adult, and serious damage to the unit. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer, or sold with the video unit. Any mounting of the unit should follow the manufacturer's instructions and should use a mounting accessory recommended by the manufacturer. An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.

9. Ventilation — Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the video unit and to protect it from overheating. These openings must not be blocked or covered. Never place the video unit on a bed, sofa, rug, or other similar surface, or near or over a radiator or heat register. This video unit should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.
10. Power Sources — This video unit should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your appliance dealer or local power company. For video units intended to be operated from battery power, or other sources, refer to the operating instructions.
11. Grounding or Polarization — This video unit may be equipped with either a polarized 2-wire AC (Alternating Current) line plug (a plug having one blade wider than the other) or 3-wire grounding type plug, a plug having a third (grounding) pin.

    The 2-wire polarized plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug still fails to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.

    The 3-wire grounding type plug will fit into a grounding type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the grounding type plug.
12. Power-Cord Protection — Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords of plugs, convenience receptacles, and the point where they exit from the unit.
13. Outdoor Antenna Grounding — If an outside antenna or cable system is connected to the video unit, be sure the antenna or cable system is grounded so as to provide some protection against voltage surges and built-up static charges. Part 1 of the Canadian Electrical Code, in USA Section 810 of the National Electrical Code, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.


ANTENNA LEAD IN WIRE
GROUND CLAMP
ANTENNA DISCHARGE UNIT (NEC SECTION 810-20)
ELECTRIC SERVICE EQUIPMENT
GROUNDING CONDUCTORS (NEC SECTION 810-21)
GROUND CLAMPS
POWER SERVICE GROUNDING ELECTRODE SYSTEM (NEC ART 250, PART H)
NEC - NATIONAL ELECTRICAL CODE

14. Lightning — For added protection of this video unit receiver during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the video unit due to lightning and power-line surges.

Important Safeguards

15. Power Lines — An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.
16. Overloading — Do not overload wall outlets and extension cords as this can result in a risk of fire or electric shock.
17. Objects and Liquids — Never push objects of any kind into this video unit through openings as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind onto the video unit.
18. Servicing — Do not attempt to service this video unit yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
19. Damage Requiring Service — Unplug this video unit from the wall outlet and refer servicing to qualified service personnel under the following conditions:
    a. When the power-supply cord or plug is damaged.
    b. If any liquid has been spilled into, or objects have fallen onto, the video unit.
    c. If the video unit has been exposed to rain or water.
    d. If the video unit does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions, as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the video unit to its normal operation.
    e. If the video unit has been dropped or the cabinet has been damaged.
    f. When the video unit exhibits a distinct change in performance — this indicates a need for service.
20. Replacement Parts — When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards.
21. Safety Check— Upon completion of any service or repairs to this video unit, ask the service technician to perform safety checks to determine that the video unit is in safe operating order.

Precautions

USE & LOCATION

- **TO AVOID SHOCK HAZARD ...** Your Palmcorder and power supply should not be exposed to rain or moisture. Do not connect the power supply or operate your Palmcorder if it gets wet. Your Palmcorder has been designed for outdoor use, however it is not designed to sustain direct exposure to water, rain, sleet, snow, sand, dust, or direct splashing from a pool or even a cup of coffee. This action could permanently damage the internal parts of your Palmcorder. Do not attempt to disassemble this unit. There are no user serviceable parts inside. Unplug your Palmcorder from the power supply before cleaning.
- **DO NOT AIM YOUR PALMCORDER AT THE SUN OR OTHER BRIGHT OBJECTS**
- **DO NOT LEAVE THE PALMCORDER WITH THE EVF AIMED DIRECTLY AT THE SUN AS THIS MAY CAUSE DAMAGE TO THE INTERNAL PARTS OF THE EVF**
- **DO NOT EXPOSE YOUR PALMCORDER TO EXTENDED HIGH TEMPERATURE ...** Such as, direct sunlight, inside a closed car, next to a heater, etc... This action could permanently damage the internal parts of your Palmcorder.
- **AVOID SUDDEN CHANGES IN TEMPERATURE ...** If the unit is suddenly moved from a cold place to a warm place, moisture may form on the tape and inside the unit.
- **DO NOT LEAVE YOUR PALMCORDER OR THE POWER SUPPLY TURNED ON WHEN NOT IN USE.**
- **STORAGE OF YOUR PALMCORDER ...** Store and handle your Palmcorder in a manner that will not subject it to unnecessary movement (avoid shaking and striking). Your Palmcorder contains a sensitive pick-up device which could be damaged by improper handling or storage.

CARE

- **TO CLEAN YOUR PALMCORDER ...** Do not use strong or abrasive detergents when cleaning your Palmcorder body.
- **TO PROTECT THE LENS ...** Do not touch the surface of the lens with your hand. Use a commercial Palmcorder lens solution and lens paper when cleaning the lens. Improper cleaning can scratch the lens coating.
- **TO PROTECT THE FINISH OF YOUR PALMCORDER ...** Before handling your Palmcorder, make sure your hands and face are free from any chemical products, such as suntan lotion, as it may damage the finish.

For assistance, please call: 1-800-211-PANA(7262) or send e-mail to: consumerproducts@panasonic.com

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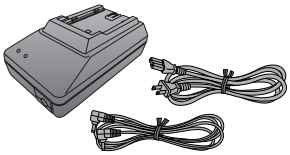
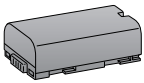
Before Using

Unpack your Palmcorder

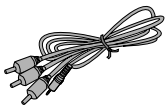
1 pc. AC Adaptor (PV-DAC11) with AC Cable and DC Cable



1 pc. Battery Pack (CGR-D08/CGR-D08R)



1 pc. A/V Cable (LSJA0280)



1 pc. Shoulder Strap (LSFC0016)

1 pc. Lens Cap (LSYF0535) with Lens Cap Strap (LSGQ0066)

1 pc. CR2025 Clock Battery (installed in Palmcorder)

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Intel® Pentium® is a registered trademark.
i.LINK is a trademark.
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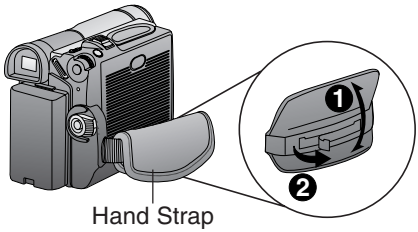
How to remove the Sensor tag



1 **Open the Hand Strap** as illustrated at left.

2 **Remove the Sensor tag.**
Then, replace the Hand Strap.

Record Speed/Playback Time

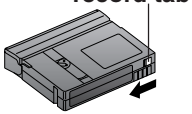
Use only those tapes having the Mini DV logo indicating the 6.35 mm digital standard.

Cassette type	Record Speed/ Playback time	
	SP	LP
AY-DVM30EJ	30 minutes	45 minutes
AY-DVM60EJ	60 minutes	90 minutes
AY-DVM80EJ	80 minutes	120 minutes

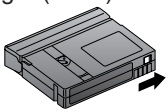
Erase Protection

Cassettes have a sliding record tab to ensure recordings are not accidentally erased.

1 **To prevent accidental erasure:**
Slide the tab to the left (open).



2 **To record again:**
Slide the tab to the right (close).

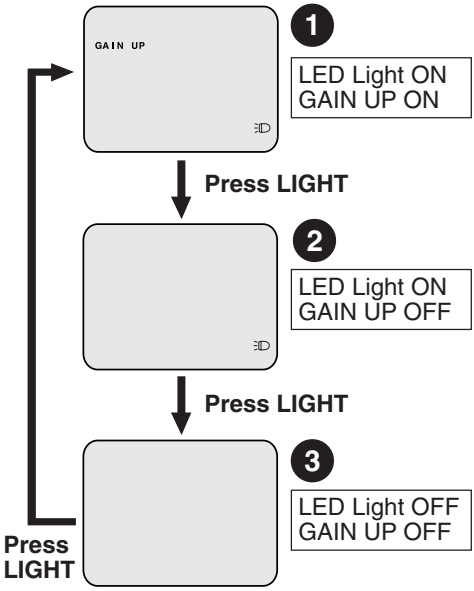


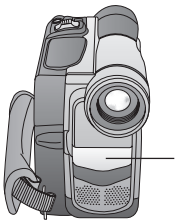
Using EfficiBright™ LED Light

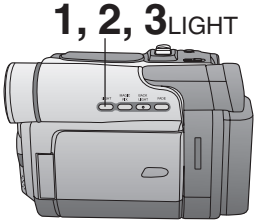
To brighten the natural colors in a scene. GAIN UP works together with the LED Light to enhance the light's brightness.

Note

- Use LED Light for recording subjects 1.5 m (4.9 feet) away or closer.







Before you begin

- Connect the Palmcorder to a power source. (pp. 14, 15)
- Set POWER to CAMERA.

1 **Press LIGHT**. (Mode 1)
- LED Light and GAIN UP turn ON.
- GAIN UP ON will be brighter than when only LED Light is ON, however, ghost images will appear.

2 **Press LIGHT**. (Mode 2)
- GAIN UP turns OFF.
- To eliminate ghost images, use this mode.

3 **Press LIGHT**. (Mode 3)
- LED Light turns OFF.
- Pressing LIGHT again returns to 1.

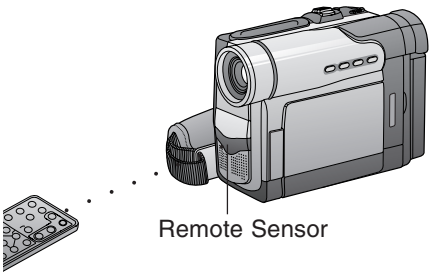
Note

- Using Light reduces battery time.
- Set LIGHT to OFF when not in use.
- Do not look directly into the light.
- If the LED Light is used with a Conversion Lens attached, a slight vignetting (darkening around edges) effect occurs on the screen.
- Using MagicPix at the same time will make conditions even brighter. (p. 39)

For assistance, please call: 1-800-211-PANA(7262) or send e-mail to: consumerproducts@panasonic.com

Remote Control (Optional)

You can operate the major functions of your Palmcorder from up to approximately 5 m (16 feet) away (indoors). Aim the IR Remote Control toward the front of the Palmcorder and press the desired buttons (Remote Sensor is located under the lens).



To operate Camera functions:
Set POWER to CAMERA.

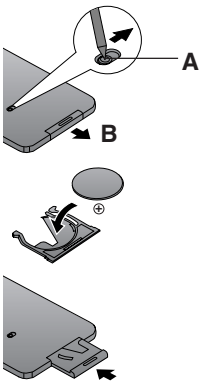
To operate VCR functions:
Set POWER to VCR.

Controlled Functions

- Rec/Pause (p. 18)
- Tele (Zoom) (p. 21)
- Wide (Zoom) (p. 21)
- Date/Time (p. 69)
- Reset (p. 44)
- PhotoShot (p. 20)
- Display On TV (p. 37)
- Counter/Time Code (p. 70)
- Audio Dubbing (p. 43)
- Record (p. 46)
- Menu (p. 17)
- Play (p. 30)
- FF/Search (p. 32)
- REW/Search (p. 32)
- Pause/Select (p. 34)
- Stop/Set (pp. 16, 17, 30, 46)
- Slow/Frame Advance (Forward) (pp. 33, 34)
- Slow/Frame Advance (Backward) (pp. 33, 34)
- Index Search (Forward) (p. 35)
- Index Search (Backward) (p. 35)
- Speaker Volume (p. 31)

Replace the Battery

Optional



1 Insert a slender pointed object, such as the tip of a ball-point pen into the slot so that it fits into the hole (as shown **A**). Then, while sliding to the right, pull the Battery Tray out with your fingernail.

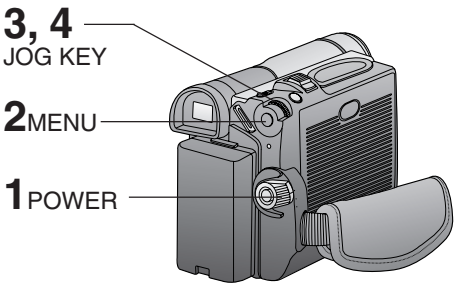
2 **Insert the battery** into the Battery Tray with the ⊕ mark facing down.
Do not reverse the polarity.

3 **Insert the Battery Tray.**

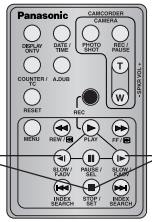
Replace battery with Panasonic PART NO. VSBW0004 (CR2025) only. Use of another battery may present a risk of fire or explosion.
Caution: battery may explode if mistreated. Dispose of used battery properly. Keep away from children. Do not recharge, disassemble or dispose of in a fire.

Remote Controlling Two Palmcorders

You can control any two Panasonic Palmcorders with one Remote control (Optional). In order for the remote to distinguish between the two units, it is necessary to set one of the Palmcorders to VCR 2. On the remote, press VCR 1 or VCR 2 to control the desired Palmcorder.



Optional

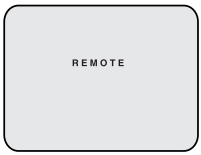


For VCR 2: Press these buttons at the same time.

For VCR 1: Press these buttons at the same time.

Note

- When the Palmcorder and remote are not set to the same mode (VCR1 or VCR2), “CHECK REMOTE MODE (REMOTE)” will appear.



1 **Set POWER to VCR or CAMERA.**
- The POWER Lamp lights red.
- Be sure POWER is fully turned to VCR or CAMERA position.

2 **Press MENU** to display the VCR or CAMERA mode menu screen.

3 **Rotate JOG KEY** to select **OTHER FUNCTIONS** in the CAMERA or VCR mode menu screen, then **press JOG KEY** to display the OTHER FUNCTIONS menu screen.

4 **Rotate JOG KEY** to select **REMOTE**, and then press JOG KEY to select VCR 2. (Menu OSD: pp. 66, 68). Leave the other Palmcorder set to VCR1.

5 **Set the Remote Control (Optional) to VCR 1 or VCR 2** to correspond with the Palmcorder you wish to control. (See above left.)

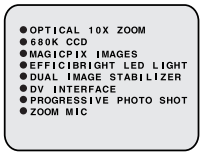
- After replacing the Remote Control Battery, the remote will default to VCR 1.

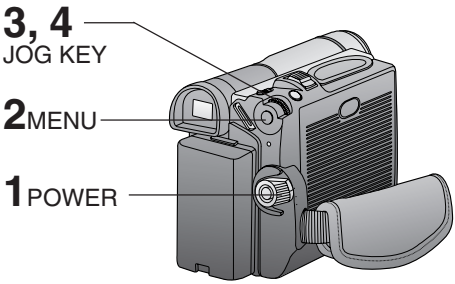
For assistance, please call: 1-800-211-PANA(7262) or send e-mail to: consumerproducts@panasonic.com

Self Demo Mode

If no operation takes place for approx. 10 minutes after the AC Adaptor was connected to the Palmcorder and the POWER Switch was turned to CAMERA without inserting a Cassette, the Palmcorder is automatically set to Self Demo mode for introducing its function. To turn it off, follow steps **1**~**4** below.

[EVF or LCD Monitor]





Before you begin

- Connect the Palmcorder to a power source. (pp. 14, 15)

1 **Set POWER to CAMERA.**

2 **Press MENU** to display the CAMERA FUNCTIONS menu screen.

3 **Rotate JOG KEY** to select **OTHER FUNCTIONS**, and **press JOG KEY** to display the OTHER FUNCTIONS menu screen.

4 **Rotate JOG KEY** to select **DEMO MODE**, and **press JOG KEY** to select OFF.

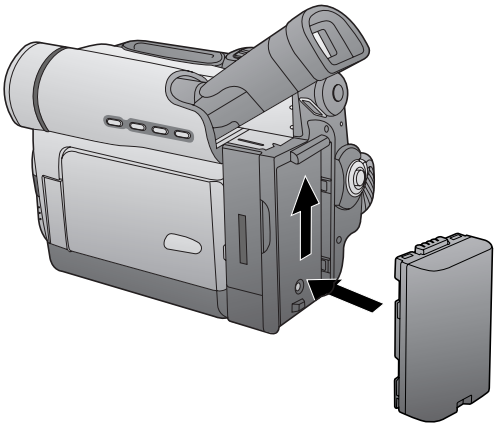
- Press MENU to exit.

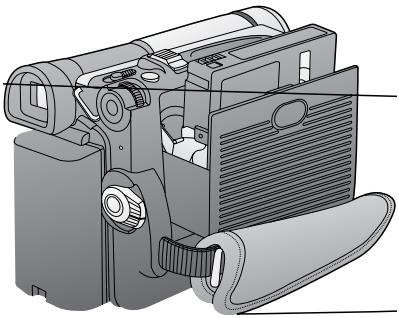
Note

- If any button is pressed or operated (except PLAY/MULTI and ZOOM), the Self Demo mode is canceled.
- The Self Demo mode can be started by setting DEMO MODE to ON and by exiting the menu.

To turn Self Demo back on:

- Set to DEMO MODE : ON in MENU screen.

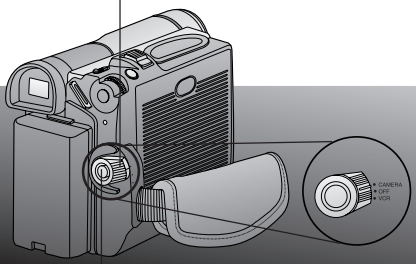




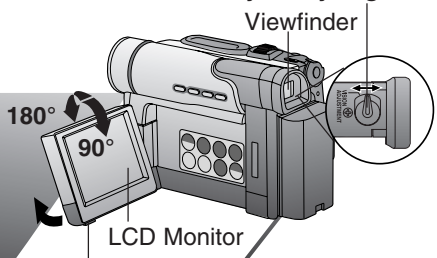
Camera Recording

When the LCD monitor is fully open, the Viewfinder automatically turns OFF.

1 **Set POWER to CAMERA.**



2 **Adjust the Vision Adjustment Control to your eyesight.**

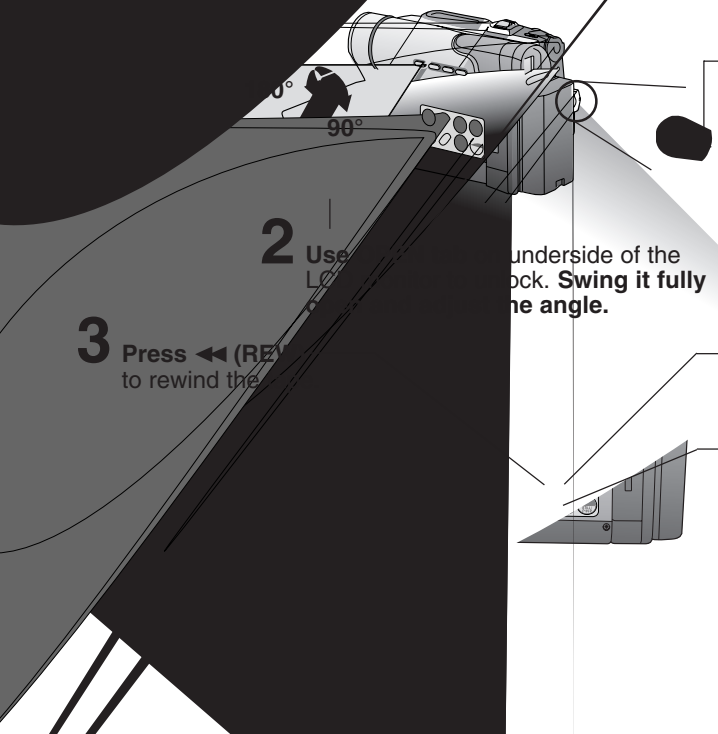


3 **Use OPEN tab** on underside of the LCD monitor to unlock. **Swing it fully open and adjust the angle.**

To Watch Playback in the LCD (Liquid Crystal Display)

Before you begin

- Charge the Battery. (p. 14)



1 **Set POWER to VCR.**

2 **Use** ... underside of the L... ock. **Swing it fully** ...**e angle.**

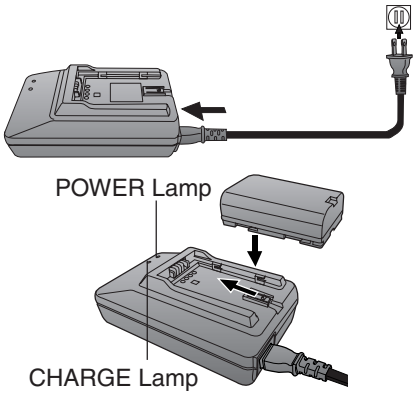
3 **Press ◀◀ (REW)** to rewind the ...

4 **Press ▶ (PLAY)** to start playback.

5 **Press ■ (STOP)** to stop playback.

Supplying Power

Charge the Battery Pack on the AC Adaptor



1 **Connect and plug in the Power Cord** as shown.
- POWER Lamp will light.
- Remove the DC Cable, if attached, from the adaptor.

2 **Attach the Battery as shown** to charge.
- CHARGE Lamp lights up. It goes out when charging is complete (approx. 1 hour). Expect approx. 2 hours of operation (EVF usage) when fully charged.

3 **Remove the Battery.**
Slide the Battery out and then lift up.

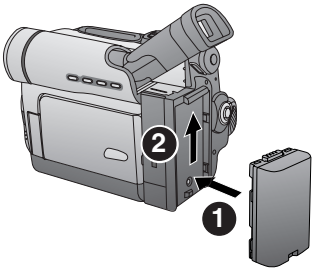
Note

About the Flashing of the CHARGE Lamp

- Charge the Battery within an ambient temperature range of 10 °C (50 °F) and 30 °C (86 °F).
- If charging is done in extreme low or high temperatures, Battery charge time increases.

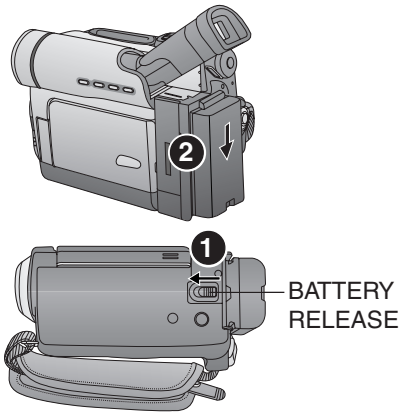
CHARGE Lamp flashes when...
- The Battery is being charged, but charging is taking longer than normal.
- Charging is not possible. Remove the Battery once, wait a short time, then re-attach it for charging.

Insert the Battery Pack



1 **Insert the Battery Pack** and slide it up until it locks with a click.

Remove the Battery Pack



1 While sliding the BATTERY RELEASE, **slide the Battery downward and remove.**

For assistance, please call: 1-800-211-PANA(7262) or send e-mail to: consumerproducts@panasonic.com

Battery Care

Caution:
- Charge only with specified charger.
- Charge the Battery within an ambient temperature range of 10 °C (50 °F) and 30 °C (86 °F).
- The Battery may be warm after charging or just after use. This is normal.
- Do not use an insufficiently charged or worn out Battery.
- If charging is done in extreme low or high temperatures, Battery charge time increases.

Safety precautions:
- Do not place the Battery near, or dispose of in fire.
- Do not directly connect (short circuit) the positive (+) and negative (–) terminals.
- Never attempt to disassemble or reassemble the Battery.

To avoid damage to the Battery:
- Do not drop or jar the Battery.
- Use the Battery with specified models only.
- If the Battery is used in extremely high temperatures, a safety device will automatically prevent operation.

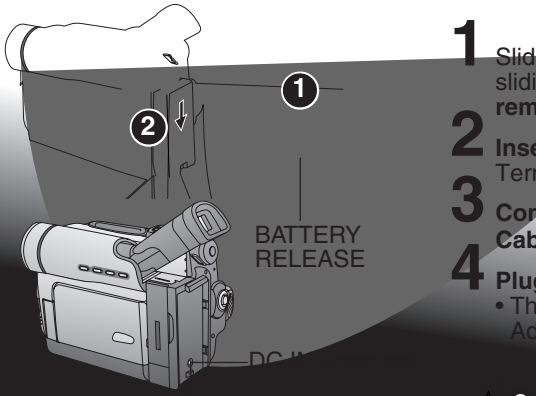
To insure longer battery life:
- **While not in use, remove Battery from the Palmcorder and AC Adaptor and store in a cool, dark, dry place.** If you leave the Battery in the Palmcorder or on the AC Adaptor, the Battery will no longer be rechargeable.
- Keep the Battery terminals clean.

U.S.A. CONSUMERS: ATTENTION:

RECYCLE RBRC Li-Ion 1.800.822.8837

A lithium ion/polymer battery that is recyclable powers the product you have purchased. Please call 1-800-8-BATTERY for information on how to recycle this battery.

Use AC Adaptor

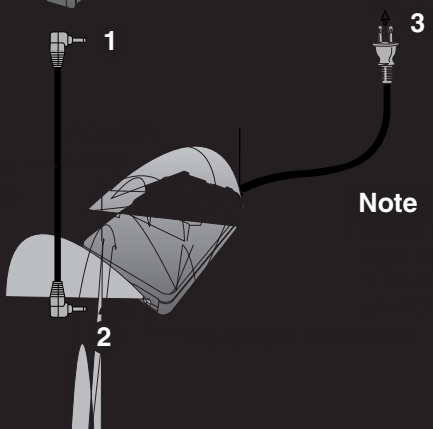


1 Slide the Battery downward while sliding BATTERY RELEASE to **remove the Battery Pack**. (p. 14)

2 **Insert the DC Cable** into the DC IN Terminal.

3 **Connect the other end of the DC Cable** to the AC Adaptor as shown.

4 **Plug in the AC Adaptor.**
- The POWER Lamp on the AC Adaptor lights up.

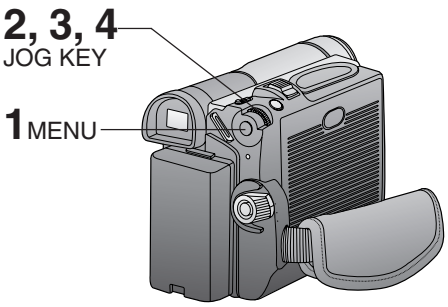


Note

Setting the Clock

Set the Date and Time

The date and time is calculated, including leap year, up to DEC 31 2089.



EXAMPLE:

YEAR : 2003

⬇ PUSH **Push**

MONTH : JAN

⬇ PUSH **Rotate**

MONTH : FEB

Before you begin

- Connect the Palmcorder to a power source. (pp. 14, 15)
- Set POWER to CAMERA or VCR.

1 **Press MENU** to display the Camera or VCR mode menu screen. (p. 17)

CAMERA FUNCTIONS

VCR FUNCTIONS

2 **Rotate JOG KEY** to select **OTHER FUNCTIONS**, and then **press JOG KEY** to display the OTHER FUNCTIONS menu screen.

3 **Rotate JOG KEY** to select **CLOCK SET**, and then **press JOG KEY** to set to ON. (Menu OSD: pp. 66, 68.)

- The CLOCK SET menu screen is displayed.

4 **Rotate JOG KEY** to select YEAR, then **press JOG KEY** to fix and move to the next item. Likewise, set the month, day, hour, and minute.

When CLOCK SET setting is completed, press MENU twice to start the clock and exit.

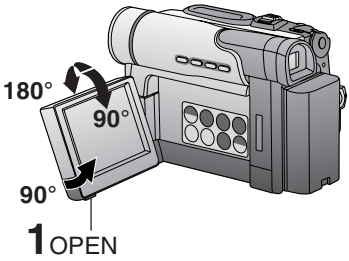
Note

- To make corrections, Press JOG KEY repeatedly to move back to an item and correct.
- If “CLOCK BATTERY” indication appears, please refer to “Replacing Clock Battery” on page 53.

For assistance, please call: 1-800-211-PANA(7262) or send e-mail to: consumerproducts@panasonic.com

Using the LCD Monitor

The LCD (Liquid Crystal Display) monitor can be used while recording.



1 **Use OPEN tab** on underside of the LCD monitor to unlock.

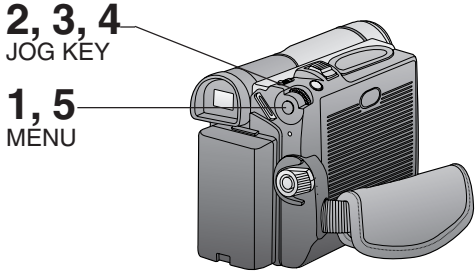
2 **Swing the LCD monitor fully open and adjust the viewing angle.**
- The LCD monitor will automatically turn on.
- When the LCD monitor is completely closed, it will shut off automatically to save power.
- Adjust the LCD Brightness and/or color of the LCD monitor if necessary. Please refer to “To adjust the LCD/EVF BRIGHTNESS or COLOR” below.

3 **Start recording.**

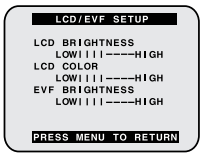
Note

- Using the LCD monitor will reduce battery operating time.
- Close the LCD monitor completely when not in use.

To adjust the LCD/EVF BRIGHTNESS or COLOR



EVF/LCD



1 **Press MENU** to display the main menu screen.

2 **Rotate JOG KEY** to select **LCD/EVF SETUP** from the main menu screen. (Menu OSD: pp. 66, 68)

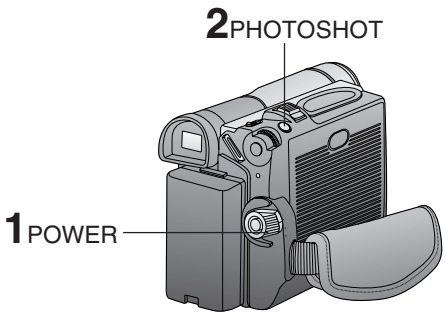
3 **Press JOG KEY** to display the LCD/EVF SETUP screen.

4 **Press JOG KEY** to select LCD BRIGHTNESS, LCD COLOR, or EVF BRIGHTNESS, then **rotate JOG KEY** to adjust.

5 **Press MENU** twice to exit this mode.

Digital PhotoShot™ Mode

Use this feature to record a seven second (approx.) still image from the current camera picture. Audio is also recorded for on-the-spot narration. Or, you can add narration later with the Audio Dubbing feature to make an interesting slide show, etc. (p. 43)



1 **Set POWER to CAMERA.**

2 **Press PHOTOSHOT** in Record/Pause mode. “PHOTO” will appear in the EVF or the LCD monitor.

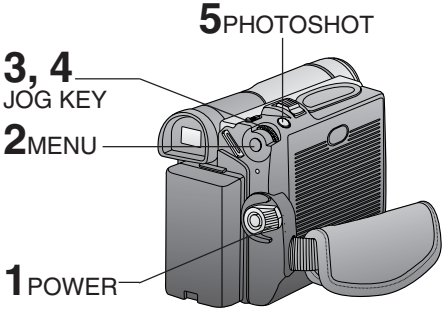
EVF/LCD

Note

- If SHTR EFFECT on the OTHER FUNCTIONS menu screen is set to ON, a sound effect similar to the shutter of a film camera will be heard when PHOTOSHOT is pressed.
- When PHOTOSHOT is pressed, the playback image takes approx. 7 seconds to process. After that, the Camera mode screen will be displayed.

Progressive PhotoShot™ Mode

With the progressive PhotoShot Function, you can record still pictures with higher resolution than with the normal PhotoShot Function.



1 **Set POWER to CAMERA.**

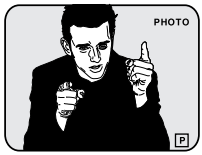
2 **Press MENU** to display the CAMERA FUNCTIONS menu screen.

3 **Rotate JOG KEY** to select **CAMERA SETUP**, and **press JOG KEY** to display the CAMERA SETUP menu screen.

4 **Rotate JOG KEY** to select **PROGRESSIVE**, and **press JOG KEY** to select ON.
- Press MENU to exit.
- “P” will appear in the EVF or the LCD monitor.

5 **Press PHOTOSHOT** in Record/Pause mode.

EVF/LCD



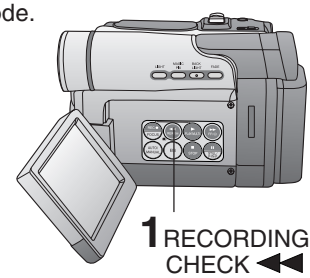
Note

- This Function may not work with some function settings.

For assistance, please call: 1-800-211-PANA(7262) or send e-mail to: consumerproducts@panasonic.com

Recording Check

To playback the final few seconds of the last recorded scene in the REC/PAUSE mode.



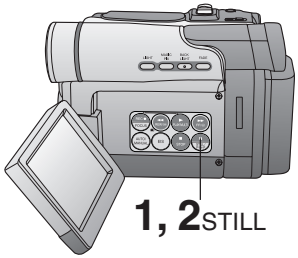
1 **Press RECORDING CHECK ◀◀** briefly in the REC/PAUSE mode.

The [CHK] indication appears.
After checking, the Palmcorder returns to the REC/PAUSE mode.

- For Recording Check, the Palmcorder must be in the same mode (SP or LP) as was used for recording, otherwise the playback picture is distorted.

Recording Still Pictures

You can record still pictures of any desired duration together with sound.

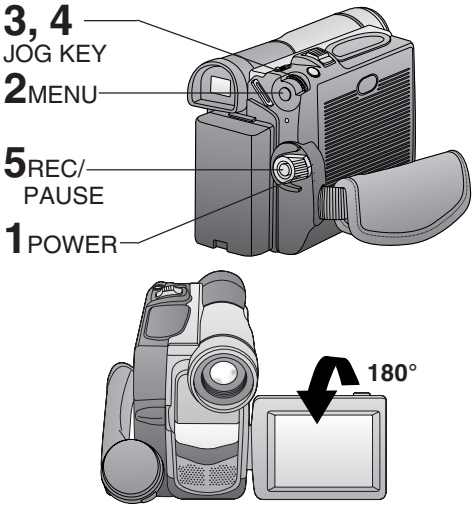


1 While in RECORD mode, **press STILL** to capture a still picture. The captured still picture will be recorded together with sound.

2 **Press STILL once again** to release the still picture. The camera will resume recording real-time pictures.

Self Recording

Rotate the LCD monitor 180 degrees so it faces the same direction as the lens to record yourself.



1 **Set POWER to CAMERA.**

2 **Press MENU** to display the CAMERA FUNCTIONS menu screen.

3 **Rotate JOG KEY** to select **OTHER FUNCTIONS**, then **press JOG KEY** to display the OTHER FUNCTIONS menu screen.

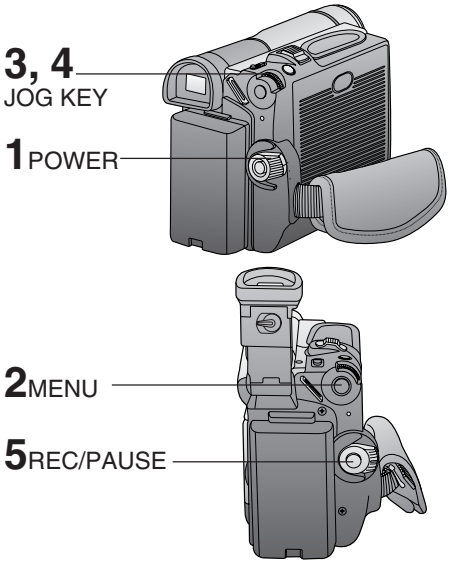
4 **Rotate JOG KEY** to select **SELF REC**, and then **press JOG KEY** to select MIRROR. (Menu OSD: p.66)
- Press MENU to exit.
- The picture in the LCD monitor will appear reversed.

5 **Start recording.**

For assistance, please call: 1-800-211-PANA(7262) or send e-mail to: consumerproducts@panasonic.com

CINEMA Mode

You can record a picture compatible with a wide-screen TV equipped with S-Video picture terminal and Zoom/Wide features.



1 **Set POWER to CAMERA.**

2 **Press MENU** to display the CAMERA FUNCTIONS menu screen.

3 **Rotate JOG KEY** to select **CAMERA SETUP**, then **press JOG KEY** to display the CAMERA SETUP menu screen.

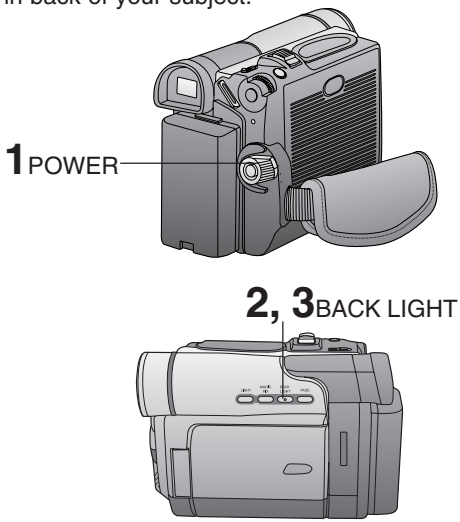
4 **Rotate JOG KEY** to select **CINEMA**, and then **press JOG KEY** to select ON.
- A black strip will appear at the top and bottom of the picture.
- Press MENU to exit.
- "CINEMA" will appear on the screen.

5 **Start recording.**

EVF/LCD

Backlight

Use when recording a subject that is darker than the surrounding scene, is in a shadowed area, or when the light source is in back of your subject.

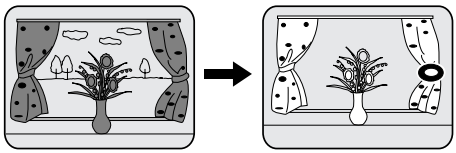


1 **Set POWER to CAMERA.**

2 **Press BACK LIGHT** to activate the Backlight feature.
- The Indicator "○" will appear in the EVF or LCD monitor.

3 **Press BACK LIGHT again** to cancel the Backlight feature.

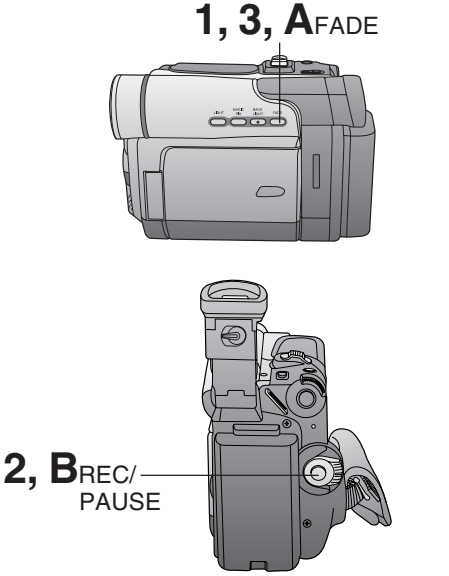
EVF/LCD

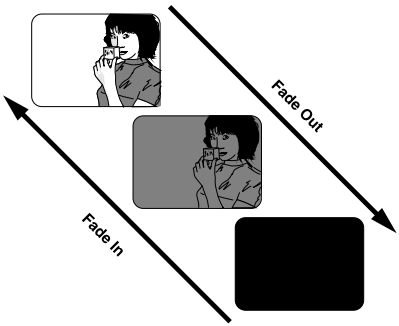


Note
- The Indicator "○" will not appear in the EVF or LCD monitor when OFF is selected in the DISPLAY menu.

Audio/Video Fade In/Out

You can make smoother scene transitions for a more professional look.





Fade In

Starting the first scene with “fade in” is very effective.

1 **In REC/PAUSE mode, hold down FADE** until the picture fades out.

2 **Press REC/PAUSE** to start recording.

3 **Release FADE** and the picture will gradually fade in.

Fade Out

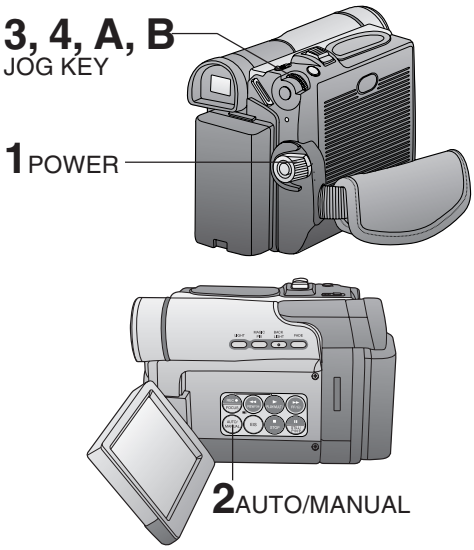
Use to create a soft ending or (together with fade in) for a soft transition from one scene to the next.

A **During recording, hold down FADE** until the picture fades out.

B **Press REC/PAUSE** to pause the recording.

White Balance

Auto White Balance (“AWB”) automatically maintains optimum color balance in most lighting conditions. However, when using Digital Functions, etc., you may get better results by using the manual adjustment.



Mode	Description
AWB	Automatically maintains optimum color balance in most lighting conditions.
	When the source illumination is a halogen lamp.
	When shooting outdoors on a sunny day.
*	The White Balance setting that was previously set manually. **Note** • When ZOOM is set to 10X or higher, White Balance cannot be adjusted.

1 **Set POWER to CAMERA.**

2 **Press AUTO/MANUAL** so that the “MNL” indication appears in the EVF or the LCD monitor.

3 **Press JOG KEY repeatedly** until “AWB” appears in the EVF or LCD monitor.

4 **Rotate JOG KEY** to select other modes. (See mode chart at left.)
• Press AUTO/MANUAL to cancel the setting.

*** For manual White Balance adjustment:**

A. **Rotate JOG KEY** to select “ ” .

B. **Point the Palmcorder at a white object (full-screen) and hold JOG KEY down until “ ” indication stops flashing.**
• If “ ” indication flashes when the Palmcorder is turned on, the previous manual White Balance setting is in effect.

In the following cases, the “ ” indication flashes:
• The flashing indicates that the previously adjusted White Balance setting is still kept. This setting will be kept until White Balance is adjusted again.
• Correct White Balance may not be attainable manually in poor lighting.

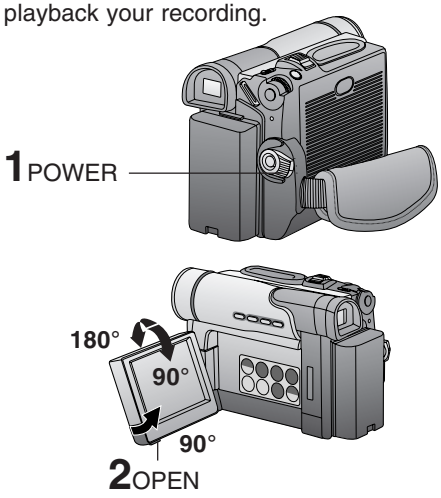
Note
• DISPLAY must be set to ALL for MF, AE, W.BALANCE, HIGH SPEED SHUTTER, or IRIS to be displayed on the LCD or EVF.
• While “GAIN UP” or “MAGICPIX” is displayed on the LCD or EVF, Manual White Balance is inoperable.

For assistance, please call: 1-800-211-PANA(7262) or send e-mail to: consumerproducts@panasonic.com

Playback Your Recordings

Playback using the LCD Monitor

You can also use the LCD monitor to playback your recording.



Before you begin

- Connect the Palmcorder to a power source. (pp. 14, 15)
- Insert a recorded cassette.

1 **Set the POWER to VCR.**
- The POWER lamp lights red.
- Be sure POWER is fully turned to the VCR position.

2 **Use OPEN tab** on underside of the LCD monitor to unlock and swing open.

3 **Press ◀◀ (REWIND/SEARCH)** to rewind the tape.

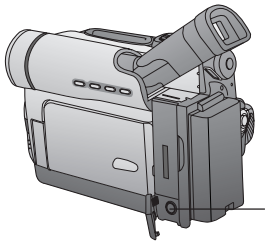
4 **Press ▶ (PLAY)** to start playback.

5 **Press ■ (STOP)** to stop playback.
- When the tape reaches its beginning during rewind or rewind search, it will stop automatically.

Note

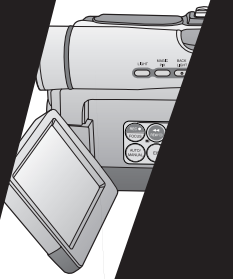
- When a tape recorded in LP mode on another digital video camera is played back on this unit, the picture may appear mosaic.
- Using the LCD monitor reduces battery operating time.
- You can place the Palmcorder on a table, etc. for viewing. Rotate the LCD Monitor 180° and swing it up against the Palmcorder body as shown.

Connecting Earphone (not supplied)



You can connect earphones (not supplied) to the PHONE Jack.

For assistance, please call: 1-800-211-PANA(7262) or send e-mail to: consumerproducts@panasonic.com

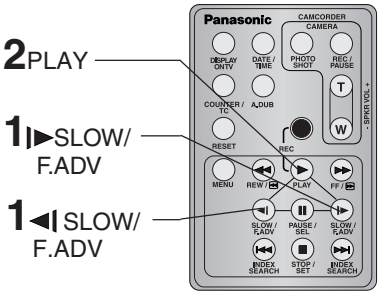


Note

• Sound is muted during all special effects.

Slow Motion Playback (Optional Remote Control Only)

Optional



1 Forward Slow:
Press |► SLOW/F.ADV during play.

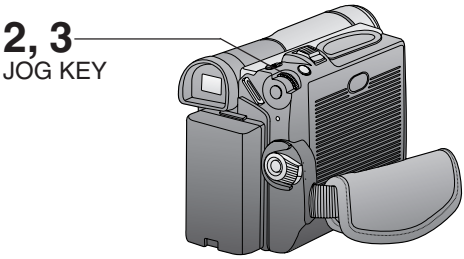
Reverse Slow:
Press ◄| SLOW/F.ADV during play.

2 **Press PLAY** to release. (During reverse slow motion playback, time code indication may not change regularly.)

Note

- Palmcorder will automatically STOP when in slow motion for more than 10 minutes.
- During slow motion playback, picture may move up and down. This is normal.
- When you start or stop slow motion playback, the picture may become bluish for an instant.

Variable Speed Search



1 **Press ▶ (PLAY)** to start playback.

2 **Press JOG KEY** for about 1 second.

3 **Rotate JOG KEY** to adjust the playback speed.
- Rotate JOG KEY clockwise for forward playback.
- Rotate JOG KEY counterclockwise for reverse playback.

To return to normal playback:
Press ▶ (PLAY). Playback will continue at normal speed.

Note

- The Variable Speed Search function offers a choice of six playback speeds (1/5X (LP mode: 1/3X), 1X, 2X, 5X, 10X, 20X) both in forward and reverse directions.
- The review playback at the 1X speed is playback in reverse direction.
- During the Variable Speed Search (except 1X speed in forward direction), mosaic-like patterns will appear in the picture.
- During the Variable Speed Search, sound is muted.
- The Variable Speed Search feature is not available when the Repeat Playback is active.

Special Effect Features

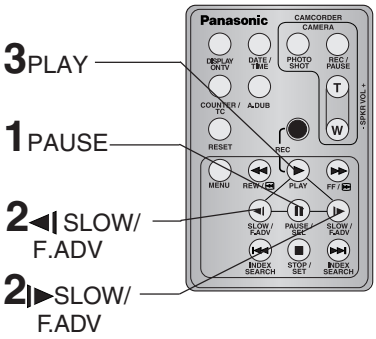
Note

• Sound is muted during all special effects.

Frame by Frame Advance

When using Optional Remote Control

Optional



1 **Press PAUSE** during playback.

2 **Press |▶ SLOW/F.ADV** to do a frame by frame advance.

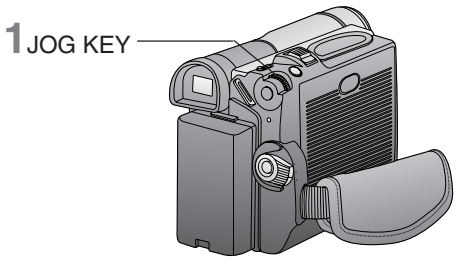
Press ◀| SLOW/F.ADV to do a frame by frame reverse.

3 **Press PLAY** to release.

Note

- If you hold down SLOW/F.ADV, you can see a continuous series of still images at a slower speed than normal slow mode.
- During frame by frame advance, a few frames may move automatically, and the picture may become bluish for an instant.

When using Palmcorder



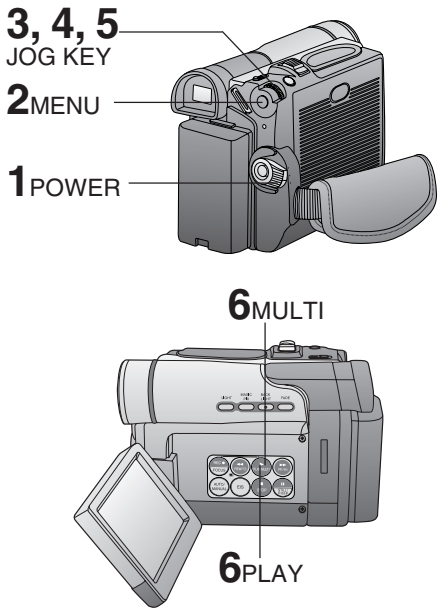
1 During Still mode, **rotate JOG KEY** to advance or reverse the picture one frame at a time.

For assistance, please call: 1-800-211-PANA(7262) or send e-mail to: consumerproducts@panasonic.com

Special Effect Features

Strobe Multi Mode

In Strobe Multi Mode, you can select the rate at which a succession of still screens are captured from the playback picture.



1 **Set POWER to VCR.**

2 **Press MENU** to display the VCR FUNCTIONS menu screen.

3 **Rotate JOG KEY** to select **PLAYBACK FUNCTIONS**, then **press JOG KEY** to display the PLAYBACK FUNCTIONS menu screen.

4 **Rotate JOG KEY** to select **MULTI SPEED** in the PLAYBACK FUNCTIONS menu screen.
(Menu OSD: p. 67)

5 **Press JOG KEY repeatedly** to set desired speed.

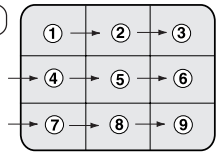
Strobe Speeds

Strobe Speeds	9 screen capture time
FAST	Every 0.3 seconds
NORMAL	Every 0.6 seconds
SLOW	Every 1.0 seconds

- **Press MENU** to exit.

6 **Press ▶ (PLAY)** to start playback.
Press ▶ (MULTI) at the point you want to start capturing.
- A succession of 9 screens will be captured, and playback will stop.

EVF/LCD



- **Press ▶ (PLAY)** to start playback.
Press ■ (STOP) to stop playback.

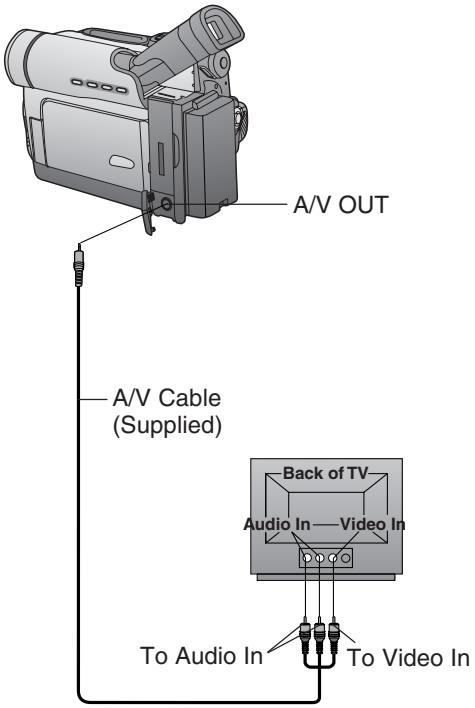
Note

- A Multi Image Playback screen cannot be output from the DV terminal or PC Connector terminal.
- A Multi screen will have slightly lower image quality.

For assistance, please call: 1-800-211-PANA(7262) or send e-mail to: consumerproducts@panasonic.com

View Recording/Playback on your TV

[TV with AUDIO/VIDEO IN Jacks]



1 **Set POWER to CAMERA or VCR.**
To view what the Palmcorder is recording or to playback a tape on your TV.

2 **Turn your TV ON and set it to LINE INPUT.**
Check your TV operating instructions for further information.

3 **Start playback or begin a recording.**

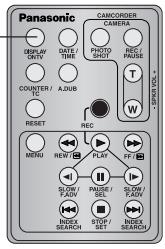
- Make sure the Palmcorder and TV are turned off while connecting.
- Please connect the A/V Cable securely.

Note

(Optional Remote Control Only)
You can display the various EVF and LCD indications on your TV by pressing DISPLAY ON TV on remote control. Press again to remove the indications.

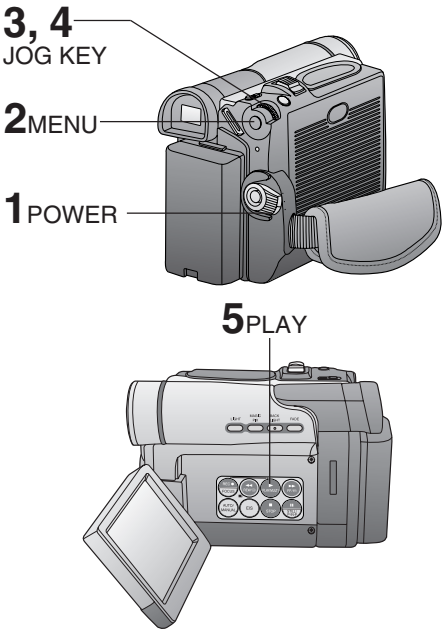
Optional

DISPLAY ON TV



VCR

Digital Zoom (Continued)



VCR mode

1 **Set POWER to VCR.**

2 **Press MENU** to display the VCR FUNCTIONS menu screen.

3 **Rotate JOG KEY** to select **DIGITAL EFFECT**, then **press JOG KEY** to display the DIGITAL EFFECT menu screen.

4 **Rotate JOG KEY** to select **D. ZOOM**, then **press JOG KEY** to select ON.
- Press MENU to exit.

5 **Press ▶ (PLAY)** to start playback.
- The center portion of the image doubles in size.

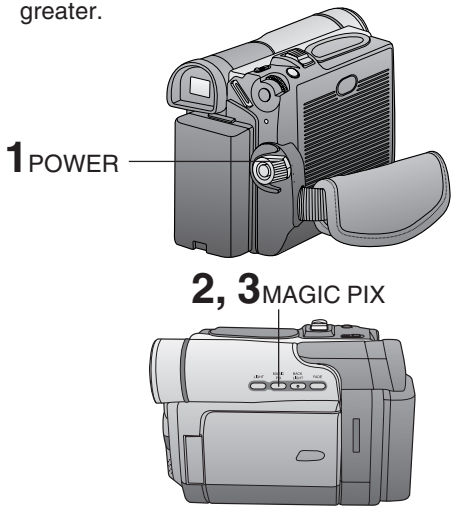
6 **Repeat steps 2~4** to select OFF to cancel this feature.

MagicPix™ Images

Color recording of video or still images onto the Mini DV tape in low lighting.

Note

- The image will be brighter than with GAIN UP, however motion jitter will be much greater.

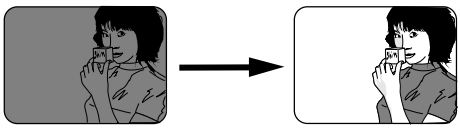


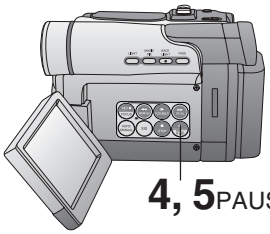
1 **Set POWER to CAMERA.**

2 **Press MAGIC PIX**.
- "MAGICPIX" will appear on the screen.

3 To cancel the Digital Function, **press MAGIC PIX** again.

EVF/LCD





To listen to the desired audio sound, set the 12bit AUDIO setting of the VCR mode MENU (Menu OSD: p. 67) as follows:

12bit AUDIO: The following selections are available for 12 bit AUDIO dubbed recordings only (sound recorded in SP mode only).

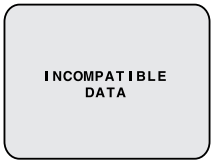
ST 1	Set this position to listen to the original sound.
ST 2	Set this position to listen to the audio dubbed sound.
MIX	Set this position to listen to both the original sound and the audio dubbed sound.

Note

- When a 16 bit recording is dubbed over, the original audio of the recording will be erased.
- When a 12 bit recording is dubbed over and played back, and MIX is selected as the AUDIO, both the original audio and the dubbed audio are played back.
- If you recorded in LP mode, you cannot use the A.DUB feature.

4 **Press II (PAUSE)** to start Audio Dubbing. "A.DUB ▷" indication appears.

- Connect the Palmcorder to the TV in order to monitor the sound. (p. 37)



Only NTSC (National Television Standards Committee) recorded tapes can be audio dubbed. The following screen appears if the tape was not recorded in NTSC format.

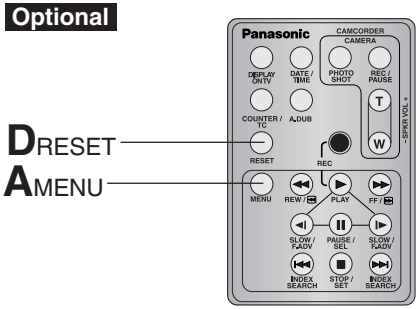
5 **Press II (PAUSE)** to stop Audio Dubbing.

- If the microphone used for dubbing gets too near the speaker of your TV, a howling noise (feedback) may occur.
- If the tape position is in or was started in a blank section, you cannot use the A.DUB feature.

Memory-Stop Editing (Optional Remote Control Only)

You can set an automatic Dubbing stop point.

Optional



A **Press MENU** to display the VCR FUNCTIONS menu screen.

B **Rotate JOG KEY** to select **DISPLAY SETUP**, and then **press JOG KEY** to display the DISPLAY SETUP menu.

C **Rotate JOG KEY** to select **C. DISPLAY**, and then **press JOG KEY** to set to MEMORY.

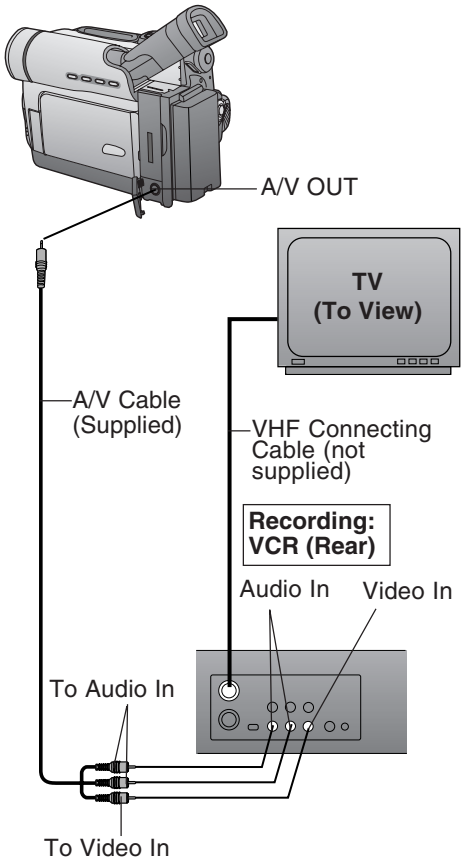
D **Press MENU** to exit MENU mode. Then, **press RESET on the remote control** to reset the Counter Memory to M 0:00.00.

Now, rewind to the editing start point, and continue with steps 2-5. The tape will now stop automatically at "M 0:00.00".

For assistance, please call: 1-800-211-PANA(7262) or send e-mail to: consumerproducts@panasonic.com

Copying your Tapes to VHS Cassette

Source (Playing) Palmcorder



Monitor with your TV

- Turn the TV ON and select its VCR channel (either CH3 or CH4).
- Set the VCR/TV Selector on the recording VCR to VCR.

Before you begin

- Connect both Palmcorder and VCR to their power sources.
- Connect the Palmcorder to a VCR as illustrated left.
- Turn ON both units.
- **Set the recording VCR's Input Signal Selector to LINE.**
- Set the Palmcorder POWER to VCR.

1 **Insert a pre-recorded tape** into the source (playing) Palmcorder and a blank tape, with record tab in place, into the target VCR (Recorder).

2 **Press ▶ (PLAY)** on the Palmcorder. When the tape reaches the point you want to start dubbing, **press PAUSE**.

3 **Place the VCR into REC/PAUSE mode.** (See VCR manual.)

4 **Simultaneously, press PAUSE** on both units to begin copying.

5 **Press STOP on both units** when copying is completed.

Note

- For technical reasons, dubbing a tape may reduce its quality.
- Press DISPLAY ON TV on the Palmcorder Remote Control (optional) to eliminate EVF/LCD Monitor indications.
- If the Time Code is displayed in the EVF or LCD monitor, it cannot be reset.
- Only the DATE/TIME, when displayed, will be recorded on the tape.

CAUTION:

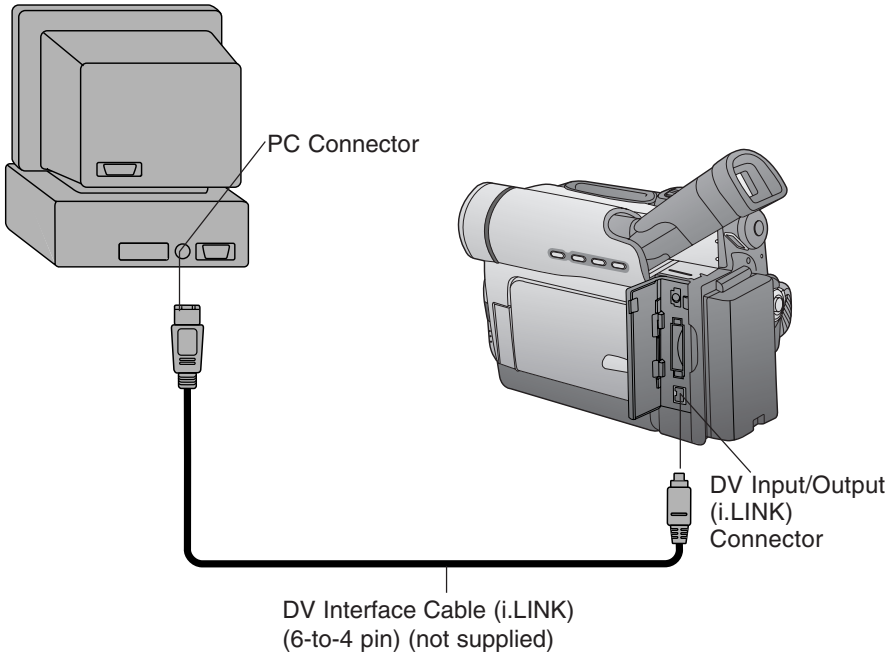
Unauthorized exchanging and/or copying of copyrighted recordings may be copyright infringement.

PC Connection with DV Interface Cable (i.LINK)

A video clip can be transferred directly to your PC (Personal Computer) via a DV Interface Cable (i.LINK) (not supplied) using products and software from a number of video editing software companies.

Using products from video editing software companies allows you to capture and edit video clips using the DV Interface (i.LINK).

Our DVC being OHCI compliant should have no problem working with any OHCI compliant Firewire Card/video - Editing software package.



Note

- During Palmcorder playback, do not disconnect the DV Interface Cable (i.LINK) or turn the Palmcorder off as this may cause a PC hang-up error.

PC Connection

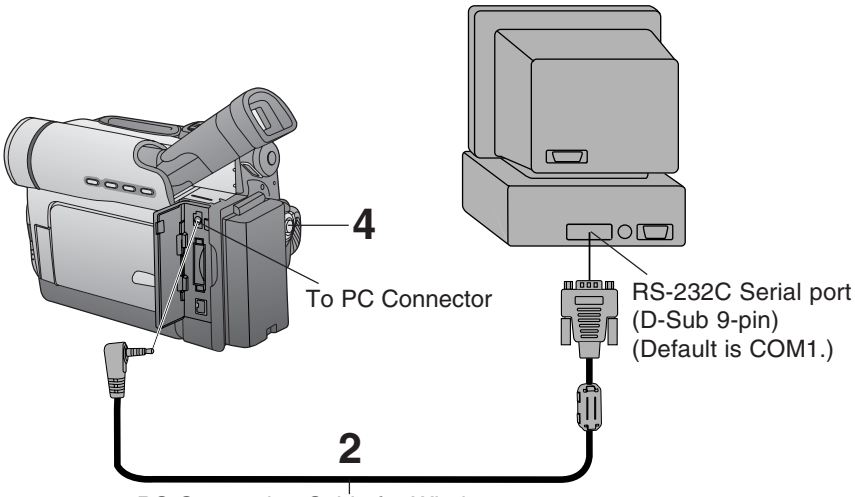
PHOTOVU LINK Driver (Optional)

An image recorded on the DV Tape can be transferred to your PC (Personal Computer).

System Requirements for PHOTOVU LINK Driver (Optional)

- IBM PC/AT or compatible
- Intel® Pentium® Processor
- Microsoft Windows 98/98SE/ME/2000/XP
- RAM: 16 MB or more
- 2 MB minimum available hard disk space
- 256 color monitor (full color recommended)
- 3.5 inch 1.44 MB floppy disk drive (for installation)
- RS-232C serial port (D-Sub 9-pin) An adaptor (D-Sub 9-pin male to a D-Sub female) is required for a D-Sub 25-pin
- Mouse or other pointing device

***Satisfy the conditions recommended by Microsoft for Windows.**



Connection

1 **Turn off your PC.**

2 **Connect the Palmcorder to your PC (Windows)** using the PC connecting cable (optional: PC Connection Unit (PV-DRS2A, p. 51)).
- Before connecting the Palmcorder to the PC, make sure the PC power is off to insure that images are transferred properly.

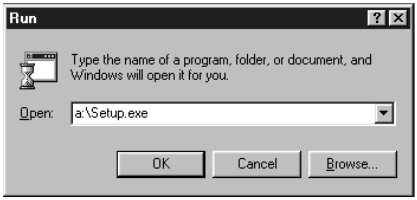
3 **Turn on your PC.**

4 **Set the Palmcorder POWER to VCR.**

Note

- For extended periods of use, it is recommended to use the AC Adaptor as a power source.
- Refer to PC or Windows manual to identify which COM port is to be used for connection.

For assistance, please call: 1-800-211-PANA(7262) or send e-mail to: consumerproducts@panasonic.com



1 Turn your PC (Personal Computer) on and start up Windows.

2 **Insert PHOTOVU LINK DRIVER Disk (Optional)** into a floppy disk drive.

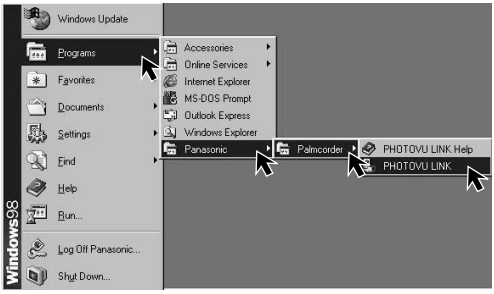
3 **Click on Start, then "Run…"**

4 **Type in "a:\setup.exe" and click OK.**
- If your 3.5 inch floppy disk drive is not "A", use the appropriate letter.

5 Follow the instructions as they appear on the PC screen until the installation is complete.
- Setup window will disappear when the installation is complete.

Running the Software

PHOTOVU LINK:
You can transfer images from your Palmcorder tape to your PC.



Before you begin
- Insert the Tape. (p. 12)
- Make Palmcorder-PC connections. (p. 48)
- Turn your PC on.
- Set Palmcorder POWER to VCR.

1 **Click on Start, "(All) Programs," "Panasonic," "Palmcorder," then "PHOTOVU LINK."**

2 **"PHOTOVU LINK" is opened.**

Note
- COM Port and Baudrate are automatically selected.

Refer to Help for information about application operations and other Error messages.

PHOTOVU LINK (Optional)

Using Tape Image Data

Pictures captured with the Palmcorder can be transferred to your PC.

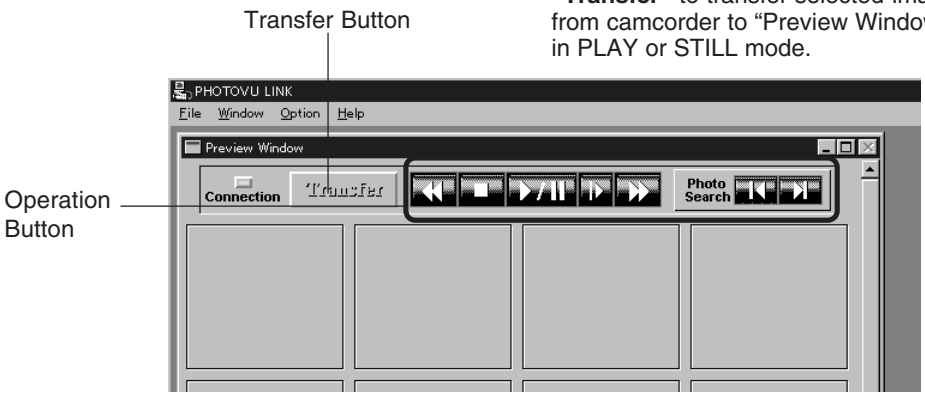
Before you begin

- Insert a recorded tape. (p. 12)
- Make Palmcorder-PC connections. (p. 48)
- Turn your PC on.
- Set Palmcorder POWER to VCR.

1 Repeat steps **1** and **2** on page 49 to run the Software.

2 **"Preview Window"** screen appears.

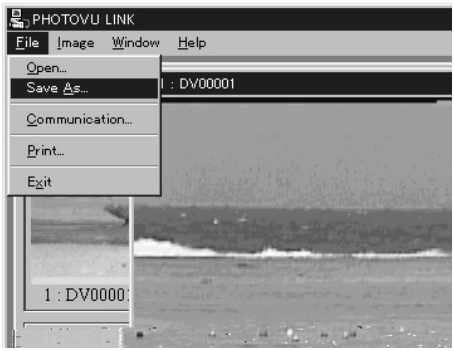
3 **Search and Select** a still scene you want to transfer to your PC using VCR Operation Buttons on the "Preview window" screen. Then click on **"Transfer"** to transfer selected image from camcorder to "Preview Window" in PLAY or STILL mode.



4 **Click on "File" then "Save As". Save transferred image to PC.**

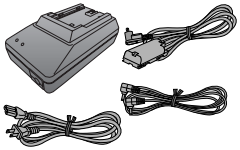
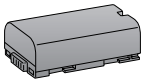
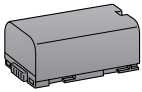
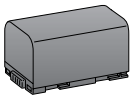
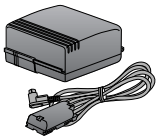
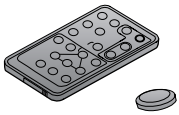
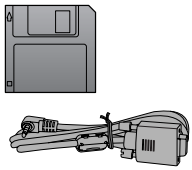
Note

- If, while transferring the image to your PC, the displayed picture appears abnormal, close PHOTOVU LINK and turn Camcorder POWER off. Run PHOTOVU LINK again and turn Palmcorder Power back on. Now transfer again.
- Photo Search may fail to detect a recorded PhotoShot image if the image is 3 seconds or less.



For assistance, please call: 1-800-211-PANA(7262) or send e-mail to: consumerproducts@panasonic.com

Palmcorder Accessory System

Accessory #	Figure	Description	Price
PV-DAC11A		AC Adaptor with AC Cable and DC Cable	$119.95
CGR-D08A/1B		800mAh / 1 h 30 min, Battery Pack	$69.95
CGR-D16A/1B		1600mAh / 3 h, Battery Pack	$99.95
CGP-D28A/1B		2800mAh / 5 h, Battery Pack	$129.95
CGR-D53A/1K		5300mAh / 9 h, Battery Pack	$229.95
PV-DDC9		DV Interface Cable (i.LINK) (4-pin to 4-pin)	$55.00
PV-DRC9		IR Remote Control	$29.95
PV-DRS2A		PC Connection Unit	Call for Pricing

Palmcorder Accessory Order Form

Please photocopy this form when placing an order.

1. Palmcorder Model # _____

2. Items Ordered

Accessory #	Description	Price Each	Quantity	Total Price
			Subtotal	
			Your State & Local Sales Tax	
			Shipping & Handling	6.95
			Total Enclosed	

3. Method of payment (check one)

☐ Check of Money Order enclosed (NO C.O.D.SHIPMENTS)

☐ VISA Credit Card # _____

☐ MasterCard Expiration Date _____

☐ Discover Customer Signature _____

Make Check or Money Order to: PANASONIC ACCESSORIES

(Please do not send cash)

4. Shipping information (UPS delivery requires complete street address)

Ship To:
Mr.
Mrs.
Ms._____
First Last

_____
Street Address

_____ _____ _____
City State Zip

Phone #:
Day ( ) _____
Night ( ) _____

TO OBTAIN ANY OF OUR PALMCORDER ACCESSORIES YOU CAN DO ANY OF THE FOLLOWING:

VISIT YOUR LOCAL PANASONIC DEALER
OR
CALL PANASONIC'S ACCESSORY ORDER LINE AT 1-800-332-5368
[6 AM-5 PM M-F, 6 AM-10:30 AM SAT, PACIFIC TIME]
OR
MAIL THIS ORDER TO: PANASONIC SERVICES COMPANY ACCESSORY ORDER OFFICE
20421 84th Avenue South Kent, WA. 98032

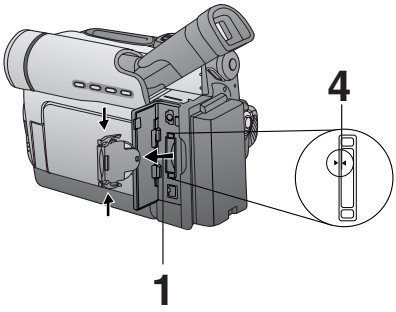
Replacing Clock Battery

The clock battery is pre-installed. Follow the steps below if replacement becomes necessary.

WARNING

Replace battery with Panasonic or Newsun type CR2025 only. Use of another battery may present a risk of fire or explosion.
Caution: battery may explode if mistreated. Dispose of used battery properly. Keep away from children. Do not recharge, disassemble or dispose of in a fire.

Clock Battery



1 **While pinching the 2 tabs, pull Battery Tray out.**

2 **Bend middle tab out and remove Battery.**

3 **Snap new Battery** (⊕mark down) into Battery Tray.
- Do not reverse the polarity.

4 **Insert Battery Tray** so the triangle marks meet.

Note

- Keep Battery out of children's reach. Swallowing it may be harmful.
- Improper installation, discharge, or missing battery causes "CLOCK BATTERY" to appear.
- Battery life is approximately 5 years.
- Set POWER to OFF or disconnect the Palmcorder from a power source when replacing the clock battery.

Approximate Brightness Values

Your Palmcorder has been designed for normal scene illumination of 150 footcandles (1500 lx). However, the Palmcorder may be used at F1:1.8, if illumination is more than 0.5 footcandles (5 lx).
The table below shows the color temperature for reference.

PALMCORDER SETTINGS	NATURAL LIGHT CONDITIONS	KELVIN COLOR TEMPERATURE	ARTIFICIAL LIGHT SOURCE	COLOR TINT MIXTURE
(Amber Filter Range)	• Fair weather, blue sky	— 10,000	• Color television	Bluish
	• Slightly cloudy sky	— 8,000		
	• Cloudy or rainy sky	— 7,000		
		— 6,500	• Fluorescent lamp (Daylight)	
	• Sunlight in clear weather at midday	— 6,000	• Camera flash bulb	
		— 5,500		
"OUTDOOR"	• Average sunlight in clear weather	— 5,000	• Blue lamp for photography	
	• Sunlight 2 hours after sunrise			
"AUTO"	and before sunset	— 4,500	• Fluorescent lamp (White)	Whitish
		— 4,000	• Normal flash bulb	
		— 3,500	• Fluorescent lamp (Off-white)	
	• Sunlight 40 min. after sunrise		• Tungsten lamp for	
"INDOOR"	and before sunset	— 3,200	photography	
			• Halogen lamp	
	• Sunlight 30 min. after sunrise		• Iodine lamp	
	and before sunset	— 2,800		
(Blue Filter Range)	• Sunlight 20 min. after sunrise		• Tungsten lamp	Yellowish
	and before sunset		• Acetylene lamp	
			• Kerosene lamp	
		— 2,000	• Candlelight	Reddish

For assistance, please call: 1-800-211-PANA(7262) or send e-mail to: consumerproducts@panasonic.com

Specifications

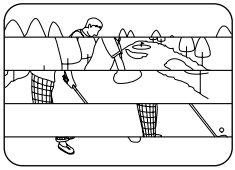
Power Source:	Palmcorder: 7.2 V DC (Battery) 7.8 V DC (AC Adaptor) AC Adaptor: 110/120/220/240 V AC, 50/60 Hz Battery: Lithium-Ion Type DC 7.2 V
Power Consumption:	Palmcorder : 7.2 V/7.8 V DC 5.5 W AC Adaptor : 18 W 1 W (when not in use.)
Digital Interface	i.LINK (IEEE1394)
Video Signal:	EIA Standard (525 lines, 60 fields) NTSC color signal
Video Recording System:	2 rotary heads. helical scanning system
Audio:	12 bit (32 kHz) 4 tracks 16 bit (48 kHz) 2 tracks
Pick-Up System and Device:	One integral color filter Charge Coupled Device (CCD) 1/6 inch
Lens:	10:1 zoom lens, F1:1.8 with auto iris control Focal length: 2.3 mm - 23 mm Power zoom function Lens filter diameter: 27 mm
Viewfinder:	8.4 mm (0.33 inch) Liquid Crystal Electronic Viewfinder
LCD Monitor:	63.5 mm (2.5 inch) Liquid Crystal Display
Minimum Illumination Required:	10 lx (F1:1.8) 1 footcandle
Operating Temperature:	32 °F~104 °F (0 °C~40 °C)
Operating Humidity:	10 %~75 %
Weight:	Palmcorder : 0.46 kg 1.01 lbs. AC Adaptor : 0.16 kg 0.35 lbs.
Dimensions:	Palmcorder : 66 (W) x 87 (H) x 123 (D) mm 2-5/8 (W) x 3-3/8 (H) x 4-7/8 (D) inch AC Adaptor : 70 (W) x 45 (H) x 115 (D) mm 2-3/4 (W) x 1-3/4 (H) x 4-1/2 (D) inch

Weight and dimensions shown are approximate.
Designs and specifications are subject to change without notice.

Notice

This product has a fluorescent lamp that contains a small amount of mercury. It also contains lead in some components. Disposal of these materials may be regulated in your community due to environmental considerations. For disposal or recycling information please contact your local authorities, or the Electronics Industries Alliance: <http://www.eiae.org.>

Cleaning Care for Video Heads



Clogged Video Head

(a) Video Head Cleaning: Normally, your Palmcorder will not require head cleaning. However, it is possible that the heads may become clogged due to dust in the air, playing damaged tapes, long term use, etc. If “NEED HEAD CLEANING” appears for 5 seconds in the EVF or LCD monitor, the heads may require cleaning.

(b) Cleaning the Heads: It is recommended that head cleaning be performed by a qualified service technician. Please contact your nearest Panasonic Servicenter. An alternate solution is to obtain a head cleaning cassette. Please use Panasonic cleaning cassette (AY-DVMCLA). Be sure to follow the cleaning instructions carefully. Excessive use of the head cleaning cassette could shorten video head life.
Use this cassette only when a head clogging symptoms occur.

Refer servicing to qualified service personnel.

Tape Operations Caution

- When you go from function to function (PLAY, FF, REW etc.), please note that the unit will not accept a new function operation until the previous operation is complete.
- The POWER Button and all function buttons, (PLAY, FF, REW, etc.) are only operational after the tape has been completely loaded.

Lens Hood Area Operation Caution

When the following accessories are attached and the zoom is set to maximum wide angle, the four corners of the sceen may appear darker:

- Wide or Telephoto conversion lens (optional).
- A filter (optional), etc. and then the lens hood.
- Two filters (optional).

For assistance, please call: 1-800-211-PANA(7262) or send e-mail to: consumerproducts@panasonic.com

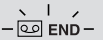
Before Requesting Service

If you have a problem with your Palmcorder, it may be something you can correct yourself. Check the list below for symptoms and corrections.

Symptom	Correction
No picture in the EVF or LCD Monitor...	• Make sure the Power Source is connected. (pp. 14, 15) • Make sure the POWER switch is set to VCR or CAMERA. (pp. 18, 30) • Check the Dew Indicator. (p. 58) • Make sure the Battery is fully charged. (p. 14) • Make sure all necessary cables are connected correctly and firmly. (p. 15) • Make sure the Lens Cap is removed. (p. 18)
Video cassette cannot be inserted...	• Make sure the Power Source is connected. (pp. 14, 15) • Insert the cassette record tab up, window side facing out. (p. 12)
Video cassette cannot be removed...	• Make sure the Power source is connected. (pp. 14, 15)
No operation starts when operation buttons are pressed...	• Check the Dew Indicator. (p. 58)
Recording cannot be done...	• Make sure the record tab is closed. (p. 6) • Check the Battery Indication. (p. 69)
Auto Focus does not operate...	• Make sure FOCUS is set to AUTO. (p. 27) • Make sure the unit is ON and set to CAMERA mode. (p. 18)
Sound from microphone cannot be monitored...	• Make sure the unit is set to REC or REC/PAUSE mode. (p. 18)
Sound cannot be heard...	• Make sure the Audio on the VCR MENU is set to ST1. (pp. 43, 67)

On-Screen Displays (OSD)

The following warning displays appear in the EVF and the LCD monitor.

Indications	Condition
TAPE NOT INSERTED	If the Palmcorder is in CAMERA mode without a cassette inserted, "" will flash and "TAPE NOT INSERTED" will appear for 5 seconds. Recording will not start.
CHECK REC TAB	If the Palmcorder is in CAMERA mode or Audio dub mode with the cassette sliding record tab opened, "" will flash and "CHECK REC TAB" will appear for 5 seconds. Recording will not start.
CANNOT REC	When Audio dub is performed and the recording in other than NTSC format, "" will flash and "CANNOT REC" will appear for 5 seconds.
 TAPE END	When the tape is about to end in REC mode, " END" will flash and "TAPE END" will appear for 5 seconds.
INCOMPATIBLE TAPE	When an incompatible tape is detected, "INCOMPATIBLE TAPE" will appear for 5 seconds.
NEED HEAD CLEANING	If the video heads require cleaning, "NEED HEAD CLEANING" will appear for 5 seconds.
REMOTE	When the Palmcorder and remote are not set to the same mode (VCR1 or VCR2), "CHECK REMOTE MODE (REMOTE)" appears for 5 seconds. It also appears when the Palmcorder is first turned on.
CANNOT REC LP-MODE	When an AUDIO DUB is attempted on a pre-recorded LP tape, "CANNOT REC LP-MODE" will appear for 5 seconds.
DEW DETECTED	If excessive moisture condenses in the unit, "WARNING" will flash, "DEW DETECTED" will appear, and the Palmcorder will automatically turn OFF in 15 seconds. In this case, wait until the indicator no longer flashes when your Palmcorder is turned ON again.
LOW BATTERY	When a battery recharge is necessary, "WARNING" will flash, "LOW BATTERY" will appear, and the Palmcorder will automatically turn OFF in 15 seconds. (p. 69)
CLOCK BATTERY	When the Clock Battery is discharged, "CLOCK BATTERY" will appear. To replace the Clock Battery, set POWER to OFF or disconnect the Palmcorder from a power source.
INCOMPATIBLE DATA	If you play a tape recorded in a format other than NTSC or you try to copy copy-protected data, "INCOMPATIBLE DATA" will appear.

For assistance, please call: 1-800-211-PANA(7262) or send e-mail to: consumerproducts@panasonic.com

Please photocopy this form when making a request for service notice.

Request for Service Notice:

In the unlikely event this product needs service.

- Please include your **proof of purchase**. (Failure to due so will delay your repair.)
- To further speed your repair, please provide an explanation of what is wrong with the unit and any symptom it is exhibiting.

Mail this completed form and your Proof of Purchase along with your unit to:
Panasonic Services Company
1705 N. Randall Road
Elgin, IL. 60123-7847
Attn: Camcorder Repair

Limited Warranty

PANASONIC CONSUMER ELECTRONICS COMPANY, DIVISION OF MATSUSHITA ELECTRIC CORPORATION OF AMERICA
One Panasonic Way Secaucus, New Jersey 07094

PANASONIC SALES COMPANY, DIVISION OF MATSUSHITA ELECTRIC OF PUERTO RICO, INC.,
AVE. 65 de Infantería, Km. 9.5 San Gabriel Industrial Park, Carolina, Puerto Rico 00985

Panasonic/Quasar Video Products Limited Warranty

Limited Warranty Coverage

If your product does not work properly because of a defect in materials or workmanship, Panasonic Consumer Electronics Company or Panasonic Sales Company (collectively referred to as "the warrantor") will, for the length of the period indicated on the chart below, which starts with the date of original purchase ("warranty period"), at its option either (a) repair your product with new or refurbished parts, or (b) replace it with a new or a refurbished product. The decision to repair or replace will be made by the warrantor.

Product	Parts	Labor	Service	Contact Number
Camcorder	One (1) Year (except CCD Image Sensor) CCD Image Sensor - 6 (Six) Months	Ninety (90) Days Ninety (90) Days	Carry-In or Mail-In	1-800-211-PANA(7262)
DVD/VCR Deck, A/V Mixer	One (1) Year	Ninety (90) Days	Carry-In or Mail-In	1-800-211-PANA(7262)
TV/VCR, TV/DVD, TV/DVD/VCR Combination	One (1) Year (except CRT) CRT - Two (2) Years	Ninety (90) Days Ninety (90) Days	Carry-In: 21" CRT and Smaller In-Home or Carry-In: 22" CRT and Larger	1-800-211-PANA(7262)
TV/HDR Combination	One (1) Year (except CRT) CRT - Two (2) Years	Ninety (90) Days Ninety (90) Days	In-Home or Carry-In	1-888-843-9788
Rechargeable Batteries (in exchange for defective item)	Ten (10) Days	Not Applicable	Carry-In or Mail-In	1-800-211-PANA(7262)
Tape (in exchange for defective item)	Five (5) Days	Not Applicable	Carry-In or Mail-In	1-800-211-PANA(7262)
Memory Cards (in exchange for defective item)	Ninety (90) Days	Not Applicable	Carry-In or Mail-In	1-800-211-PANA(7262)

During the "Labor" warranty period there will be no charge for labor. During the "Parts" warranty period, there will be no charge for parts. You must carry-in or mail-in your product or arrange for in-home service, as applicable, during the warranty period. If non-rechargeable batteries are included, they are not warranted. This warranty only applies to products purchased and serviced in the United States or Puerto Rico. This warranty is extended only to the original purchaser of a new product which was not sold "as is". A purchase receipt or other proof of the original purchase date is required for warranty service.

Carry-In, Mail-in or In-Home Service

For Carry-In, Mail-In or In-Home Service (as applicable) in the United States call toll free contact number listed above or visit Panasonic Web Site: http://www.panasonic.com

For assistance in Puerto Rico call Panasonic Sales Company (787)-750-4300 or fax (787)-768-2910.

In-Home service, if applicable, requires clear, complete and easy access to the product by the authorized servicer and does not include removal or re-installation of an installed product. It is possible that certain in-home repairs will not be completed in-home, but will require that the product, or parts of the product, be removed for shop diagnosis and/or repair and then returned.

Limited Warranty Limits And Exclusions

This warranty ONLY COVERS failures due to defects in materials or workmanship, and DOES NOT COVER normal wear and tear or cosmetic damage, nor does it cover markings or retained images on the picture tube resulting from viewing fixed images (including, among other things, letterbox pictures on standard 4:3 screen TV's, or non-expanded standard 4:3 pictures on wide screen TV's, or onscreen data in a stationary and fixed location). The warranty ALSO DOES NOT COVER damages which occurred in shipment, or failures which are caused by products not supplied by the warrantor, or failures which result from accidents, misuse, abuse, neglect, mishandling, misapplication, alteration, faulty installation, set-up adjustments, misadjustment
'

Customer Services Directory

For Product Information, Operating Assistance, Literature Request, Dealer Locations, and all Customer Service inquiries please contact:
1-800-211-PANA (7262), Monday-Friday 9 am-9 pm; Saturday-Sunday 9 am-7 pm, EST.
or send e-mail : consumerproducts@panasonic.com
For hearing or speech impaired TTY users, TTY: 1-877-833-8855

Web Site: http://www.panasonic.com
You can purchase parts, accessories or locate your nearest servicenter by visiting our Web Site.

Accessory Purchases:

1-800-332-5368 (Customer Orders Only)
For hearing or speech impaired TTY users, TTY: 1-866-605-1277
Panasonic Services Company 20421 84th Avenue South, Kent, WA 98032
(Monday-Friday 6 am-5 pm; Saturday 6 am-10:30 am, PST)
(Visa, MasterCard, Discover Card, American Express, Check)

Product Repairs

Centralized Factory Servicenter

MAIL TO : Panasonic Services Company
1705 N. Randall Road,
Elgin, IL 60123-7847
Attention: Camcorder Repair

Please carefully pack and ship, prepaid and insured, to the Elgin Centralized Factory Servicenter. Customer's in Puerto Rico, please ship or carry in to location below ("Service in Puerto Rico").

Service in Puerto Rico

Matsushita Electric of Puerto Rico, Inc. Panasonic Sales Company/ Factory Servicenter:
Ave. 65 de Infanteria. Km. 9.5, San Gabriel Industrial Park, Carolina, Puerto Rico 00985
Phone (787) 750-4300 Fax (787) 768-2910

As of August 2002

Precauciones para su seguridad

ADVERTENCIA: PARA EVITAR INCENDIOS Y DESCARGAS ELÉCTRICAS, NO EXPONGA ESTE EQUIPO A LA LLUVIA NI A LA HUMEDAD.

Su Mini DV Palmcorder está diseñada para grabar y reproducir en el modo de Reproducción Estándar (SP) y modo Largo (LP).
Se recomienda el uso sólo de cintas de cassette que hayan sido probadas e inspeccionadas para su uso en aparatos VCR con la marca Mini DV.

PRECAUCIÓN
RIESGO DE DESCARGA ELÉCTRICA
NO ABRIR
PRECAUCIÓN: PARA REDUCIR EL RIESGO DE DESCARGA ELÉCTRICA, NO QUITE LA CUBIERTA (O PARTE POSTERIOR).
EL APARATO NO TIENE EN SU INTERIOR PIEZAS QUE PUEDAN SER REPARADAS POR EL USUARIO.
SOLICITE TODA REPARACIÓN A PERSONAL DE SERVICIO CUALIFICADO.
Este símbolo tiene por finalidad alertar al usuario acerca de la presencia de tensión sin aislación en el interior del producto, que puede tener la intensidad suficiente como para causar descargas eléctricas. Por lo tanto, hacer contacto con cualquier pieza en el interior de la unidad es peligroso.
Este símbolo tiene por finalidad alertar al usuario de la presencia de importantes instrucciones de operación y mantenimiento en la literatura incluida con la unidad. Por lo tanto, lea detenidamente la literatura incluida para evitar problemas.

La etiqueta de régimen está pegada en la base de la cubierta del cargador.

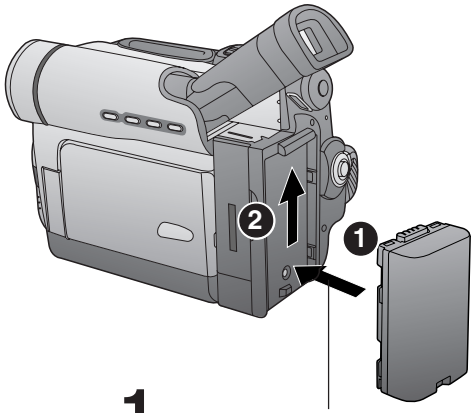
Este dispositivo cumple con la parte 15 de las Reglas del FCC. El funcionamiento está sujeto a las dos siguientes condiciones: (1) Este dispositivo puede no causar interferencias perjudiciales, y (2) este dispositivo debe aceptar cualquier interferencia recibida, incluyendo interferencias que pueden causar un funcionamiento no deseado.

Nota: Este equipo ha sido puesto a prueba y se encontró que cumple con la Parte 15 de las reglas del FCC. Estos limites están diseñados para proveer una protección razonable contra interferencias cuando se opera en un ambiente residencial.
Si este equipo causa interferencias en la recepción de radio o televisión, lo cual se puede comprobar al apagar y encender el equipo, utilice el equipo en otra ubicación y/o utilice un tomacorriente diferente al que está utilizando el receptor. Si es necesario, consulte con el distribuidor o un técnico experto de radio/TV para solicitar ayuda. Puede encontrar útil el folleto 'Información sobre las interferencias' disponible en las oficinas regionales del FCC local.

Advertencia del FCC:
Para asegurar la conformidad continua del FCC, utilice solamente el cable de interfaz blindado cuando conecte una cámara de video digital a una computadora de acuerdo con las instrucciones incluidas aquí. También, cualquier cambio sin autorización o modificaciones a este equipo anularían la autoridad del usuario para operarlo.

Inserte de la batería

Antes de comenzar
- Cargue la battería. (Página 14.)

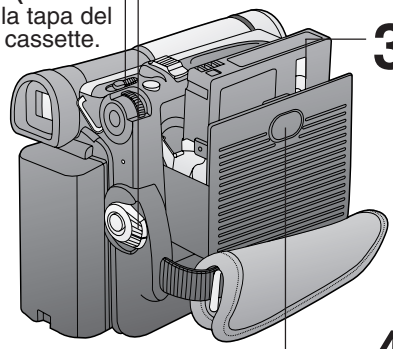


1 **Coloque la batería** y deslícela hacia arriba hasta que se quede bloqueada con un clic.

Inserte el Cassette

Esta videocámara contiene un sistema de ejecución fácil del cassette. Por eso, es fácil de introducir o sacar el cassette aunque esté montado sobre un trípode. (Página 7.)

2 **Deslice el interruptor de expulsión de cinta (TAPE EJECT)** para abrir la tapa del compartimento del cassette.



1 **Ajuste el interruptor de alimentación (POWER) a la posición VCR o CAMERA.**

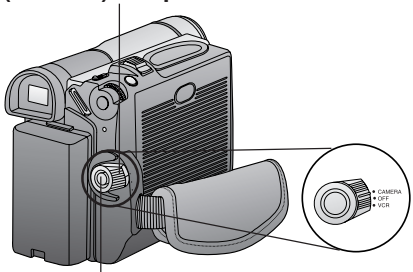
3 **Introduzca un cassette con la parte de la ventana hacia arriba.**
- Asegúrese de que la lengüeta de grabación esté cerrada. (Página 6.)

4 **Presione la marca PUSH CLOSE (EMPUJAR PARA CERRAR)** para cerrar la tapa del compartimiento del cassette.

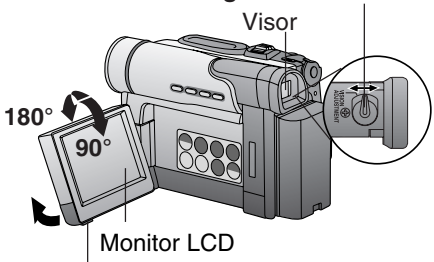
Grabación con la cámara

Cuando el monitor LCD se enchuentra totalmente abjerto, el visor se DESACTIVA automàticamente.

1 **Ajuste el interruptor de alimentación (POWER) a la posición CAMERA.**



2 **Ajuste el control Ide ajuste de visión según lo desee.**



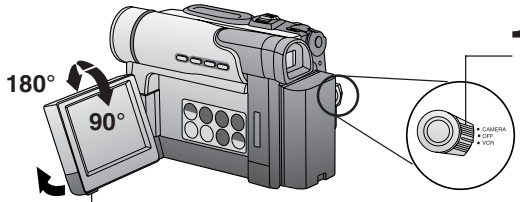
4 **Presione el botón de grabación/pausa (REC/PAUSE)** para iniciar la grabación. **Vuelva a pulsar el botón de grabación/ pausa (REC/PAUSE)** para hacer una pausa en la grabación.

3 **Utilice la lengüeta OPEN** para desbloquear el monitor LCD. **Balancée abriéndolo completamente y ajuste el àngulo.**

Para ver la reproducción en el LCD (pantalla de visualización de cristal líquido)

Cuando el monitor LCD se enchuentra totalmente abierto, el visor se DESACTIVA automáticamente.

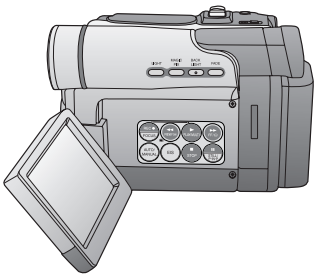
Antes de comenzar
- Cargue la battería. (Pàgina 14.)



1 **Ajuste el interruptor de alimentación (POWER) a la posición VCR.**

2 **Utilice la lengüeta OPEN** para desbloquear el monitor LCD. **Balancée abriéndolo completamente y ajuste el àngulo.**

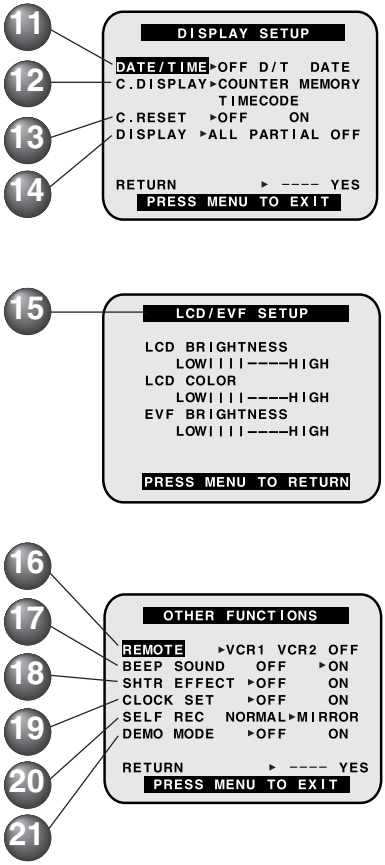
3 **Presione el botón de rebobinado ◀◀ (REW)** para rebobinar la cinta.



4 **Presione el botón de reproducción ▶ (PLAY)** para reproducir la cinta.

5 **Presione el botón de parada ■ (STOP)** para detener la reproducción.

MENU OSD



11 DATE/TIME (p. 69)
The date and time can be set and displayed on the screen.

12 C. DISPLAY (p. 70)
To [illegible] indication displayed on the LCD Monitor or in the viewfinder.

13 C. RESET (p. 70)
Setting to ON resets the counter to zero.

14 DISPLAY (p. 70)
To select the desired type of display changes to all function display, Partial display, and Minimum display.

15 LCD/EVF SETUP (p. 19)
Setting to ON displays the menu for adjusting the LCD brightness, color level, and the EVF brightness.

16 REMOTE (p. 10)
VCR1: To receive signals from the Remote Control, set to VCR1.
VCR2: To receive signals from the Remote Control, set to VCR2.
OFF: To prevent reception of signals from the Remote Control.

17 BEEP SOUND
Set to ON to hear beep when starting and stopping camera recording or when unusual conditions occur. To cancel the beep, set to OFF.

Palmcorder will beep:
Once when you start recording
Twice when you stop recording
Repeatedly when warning of unusual conditions. (p. 58)

18 SHTR EFFECT (p. 20)
When set to ON, still pictures taken in the PhotoShot mode are recorded with a visual shutter effect and click sound.

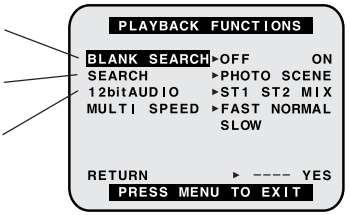
19 CLOCK SET (p. 14)
When set to ON, the date and time can be set on the screen.

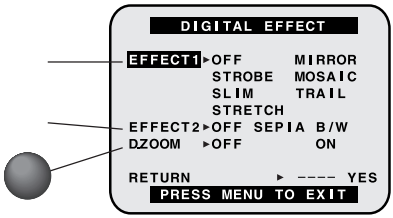
20 SELF REC (p. 22)
NORMAL: During self-recording, the picture on the LCD Monitor is the same as it will be recorded.

21 DEMO MODE (p. 11)
When set to ON, Self Demo starts.

For assistance, please call: 1-800-211-PANA(7262) or send e-mail to: consumerproducts@panasonic.com

VCR Mode Menu Screen




DIGITAL EFFECT
EFFECT1 ▸OFF MIRROR STROBE MOSAIC SLIM TRAIL STRETCH
EFFECT2 ▸OFF SEPIA B/W
D.ZOOM ▸OFF ON
RETURN ▸ ---- YES
PRESS MENU TO EXIT

1 **BLANK SEARCH** (p. 31)
Select ON to go directly to a blank portion of the tape.

2 **SEARCH** (p. 35)
To select the desired Index Search function.

PHOTO: To search for Photo shot pictures.

SCENE: To search for scenes marked with Index signal.

3 **12bit AUDIO** (p. 44)
To select the desired audio playback mode after performing audio dubbing in the 12 bit mode (SP mode only).

ST1 : The original sound alone is played back.

ST2 : The dubbed sound alone is played back.

MIX : The original sound and the dubbed sound are played back together.

4 **MULTI SPEED** (p. 36)
In Strobe Multi mode, used to select the interval at which a succession of still screens are captured from the playback picture.

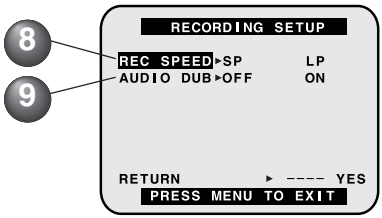
FAST : Every 0.3 seconds
NORMAL : Every 0.6 seconds
SLOW : Every 1.0 seconds

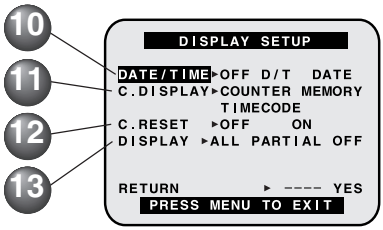
5 **EFFECT1** (p. 41)
To select one of the 6 digital functions.
Setting to OFF cancels the previously selected digital function.

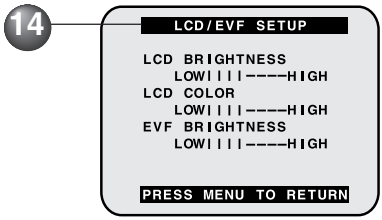
6 **EFFECT2** (p. 41)
To select one of the 2 digital picture effects for playback. Setting to OFF cancels the previously selected digital effect.

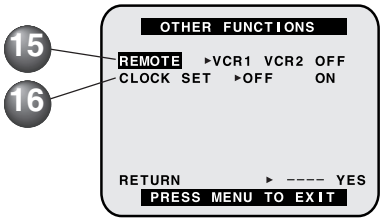
D. ZOOM (p. 39)
Set to ON to double the size of a playback image. Setting to OFF cancels the previously selected digital zoom.

MENU OSD









8 REC SPEED (p. 6)
SP: Normal recording speed mode.
LP: Recording time is 1.5 times as long as in the SP mode. For example, 120 minutes of recording is possible on an 80 minute tape.

9 AUDIO DUB (p. 43)
Set to AUDIO DUB "ON" in the Menu OSD to use the Audio Dub feature.

10 DATE/TIME (p. 69)
The date and time can be set and displayed on the screen.

11 C. DISPLAY (p. 70)
To select the desired type of counter indication displayed on the LCD Monitor or in the viewfinder.

12 C.RESET (p. 70)
Setting to ON resets the counter to zero.

13 DISPLAY (p. 70)
To select the desired type of display changes to all function display, Partial display, and Minimum display.

14 LCD/EVF SETUP (p. 19)
Setting to ON displays the menu for adjusting the LCD brightness, color level, and the EVF brightness.

15 REMOTE (p. 10)
VCR1 : To receive signals from the Remote Control, set to VCR1.
VCR2 : To receive signals from the Remote Control, set to VCR2.
OFF : To prevent reception of signals from the Remote Control.

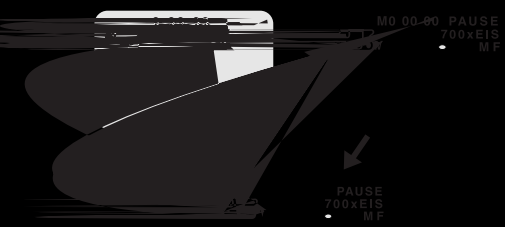
16 CLOCK SET (p. 16)
When set to ON, the date and time can be set on the screen.

For assistance, please call: 1-800-211-PANA(7262) or send e-mail to: consumerproducts@panasonic.com

m

j

k



IMPORTANT NOTE:
- Display must be set to ALL for MF, AE, W.BALANCE or BACK LIGHT indications to be displayed on the EVF or LCD Panel when selected.
- C.RESET does not work when C. DISPLAY is set to T.CODE.

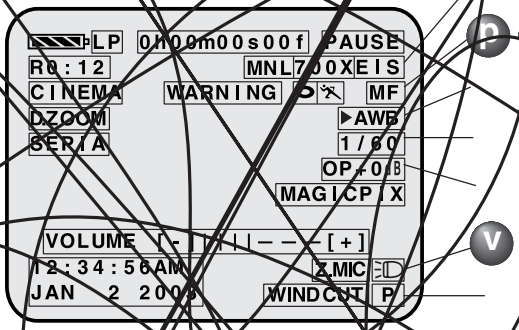
l **Tape Mode Indications**

REC	Recording.
PHOTO	PhotoShot recording.
PAUSE	Paused during recording.
	Playback.
II	Still.
I	Slow (forward).
I	Slow (reverse).
II	Frame Advance (forward).
II	Frame Advance (reverse).
R	Repeat Playback.
CHK	Recording Check.
FF	Fast forward.
REW	Rewind.
	FF Search.
	REW Search.
BLANK	Blank Search.
SEARCH	Index Search.

m **MAGICPIX Indication** (p. 39)
This display appears when MAGIC PIX is pressed.

Electronic Viewfinder/LCD Monitor Indications

CAMERA/VCR Mode



n **Zoom Magnification Level** (p. 38)

o **Digital EIS Indications** (p. 40)
This display appears when EIS is pressed.

p **Backlight Indication** (p. 23)
This display appears when BACK LIGHT is pressed.

q **PROGRAM-AE Indication** (p. 24)

r **Manual Focus Indication** (p. 27)

s **White Balance Indication** (p. 26)

t **Shutter Mode Indication** (p. 28)

Iris Indication (p. 29)

Z.MIC Indication (Menu OSD: p. 65)
This display appears when ZOOM MIC is set to ON.

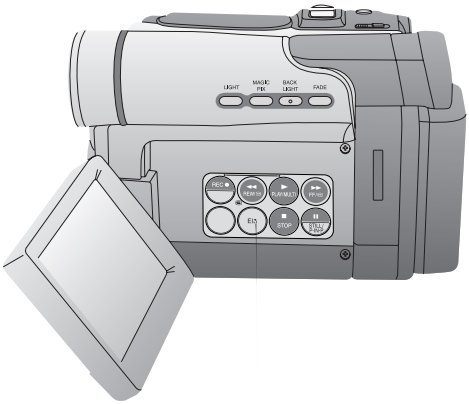
Light Indication (p. 8)
This display appears when LIGHT is set to ON.

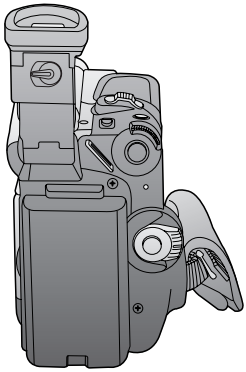
WIND CUT Indication (Menu OSD: p. 65)
This display appears when WIND CUT is set to ON.

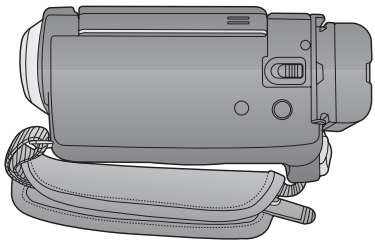
y **Progressive Indication** (Menu OSD: p. 65)
This display appears when PROGRESSIVE is set to ON.

Rear View

Side View

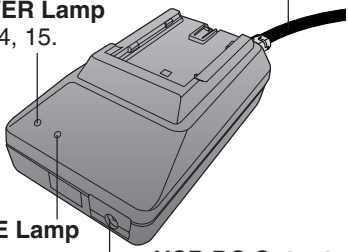






Index of Controls

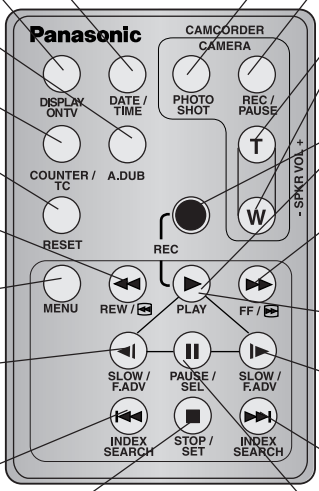
AC Adaptor



CAUTION:

This unit will operate on 110/120/220/240 V AC. An AC plug adaptor may be required for voltages other than 120V AC. Please contact either a local or foreign electrical parts distributor for assistance in selecting an alternate AC plug.
We recommend using the accessory power plug adaptor (VJSS0070/KZDB4ZE00001) in an area which has special AC outlets.

Remote Control (Optional)



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For assistance, please call: 1-800-211-PANA(7262) or send e-mail to: consumerproducts@panasonic.com

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Panasonic Consumer Electronics Company,
Division of Matsushita Electric Corporation of America
One Panasonic Way Secaucus, New Jersey 07094

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Ave. 65 de Infanteria, Km. 9.5 San Gabriel Industrial Park Carolina,
Puerto Rico 00985

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